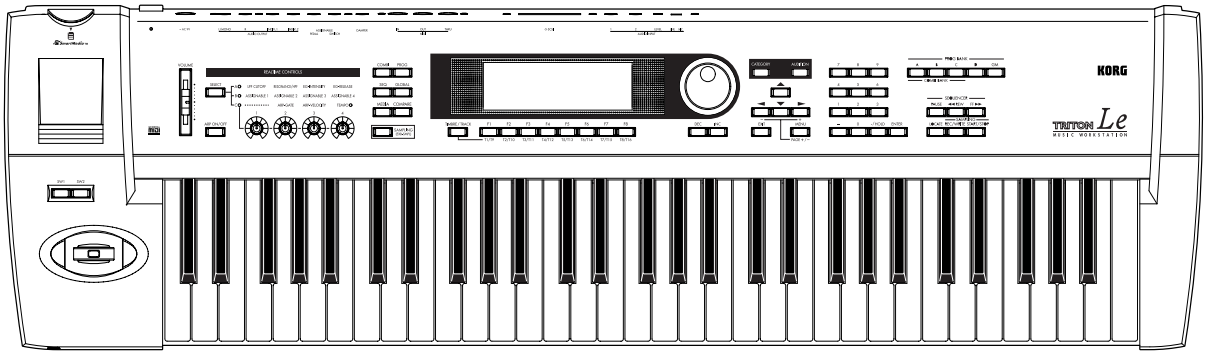
TRITON Le

MUSIC WORKSTATION

Parameter Guide



HYPER INTEGRATED SYNTHESIS SYSTEM

GENERAL MIDI

KORG

Ⓔ ②

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About this manual

This **“Parameter Guide”** contains explanations and other information regarding the operations of the parameters and settings on the TRITON Le. The explanations are organized by mode, page, and tab. Explanations and other information on the effects and their parameters are also provided for each effect.
Refer to this guide when an unfamiliar parameter appears in the display, or when you need to know more about a particular function.

Conventions in this manual

Abbreviations for the manuals BG, PG, VNL

References to the manuals included with the TRITON Le are abbreviated as follows.

BG: Basic Guide
PG: Parameter Guide
VNL: Voice Name List

Switches and knobs [ ]

References to the keys, dials, and knobs on the TRITON Le’s panel are enclosed in square brackets [ ].

Parameters in the LCD display screen “ ”

Parameters displayed in the LCD screen are enclosed in double quotation marks “ ”.

Boldface type

Parameter values are printed in boldface type.
Content that is of particular importance is also printed in boldface type.

Procedure steps ① ② ③ ...

Steps in a procedure are listed as ① ② ③ ...

☞p.■, ☞BG p.■, ☞■.■ – ■

From the left, these symbols indicate a reference page in the Parameter Guide, a reference page in the Basic Guide, and a parameter number.

Symbols , note, MIDI, AMSource, D-mod, Sync

These symbols respectively indicate cautions, advice, MIDI-related explanations, a parameter that can be selected as an alternate modulation source, a parameter that can be selected as a dynamic modulation source, and a parameter that can use the BPM / MIDI Sync function.

Example screen displays

The values of the parameters shown in the example screens of this manual are only for explanatory purposes, and may not necessary match the values that appear in the LCD screen of your instrument.

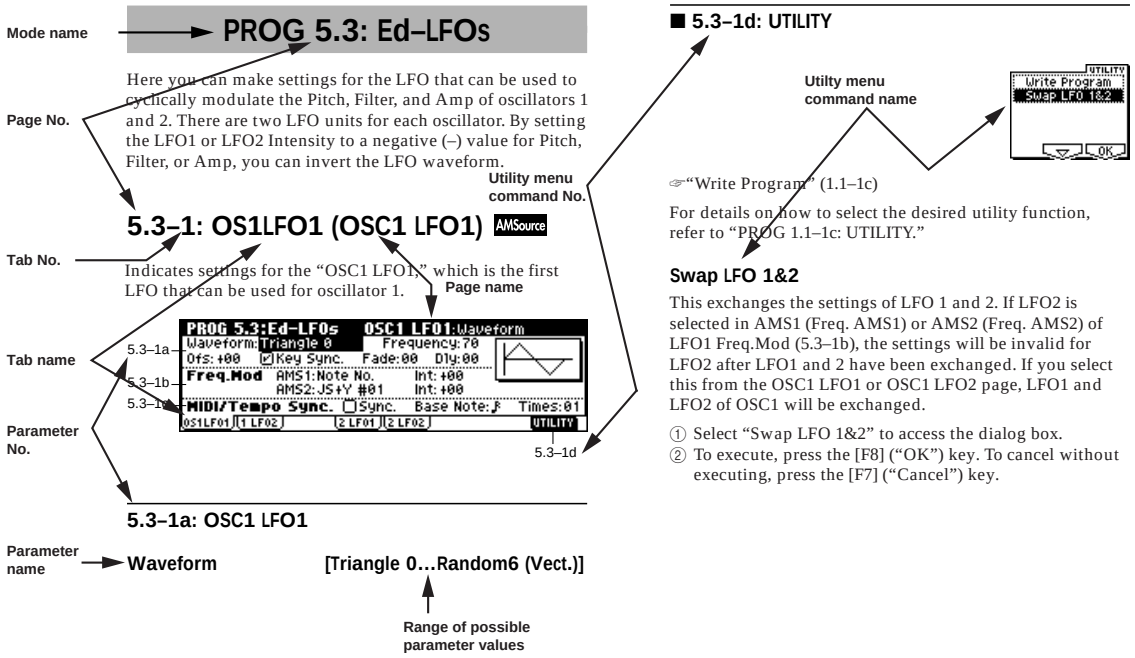
MIDI-related explanations

CC# is an abbreviation for Control Change Number.

In explanations of MIDI messages, **numbers in square brackets [ ]** always indicate hexadecimal numbers.

How to read the “Parameter Guide”

(example)



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1. Program mode

PROG PAGE MENU

Use the following procedure to select the desired page from within the current mode.

① Press the [MENU] key to access the "PAGE MENU." The "PAGE MENU" will show an abbreviated name for each page.

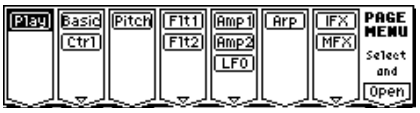
② Use the [F1]–[F7] keys at the bottom of the page to select the desired page. Pressing the same key repeatedly will scroll through the various sub-pages. You can also move by using the cursor keys [▲], [◄], [▼], [►].

③ Press the [F8] ("Open") key to access the page.

④ If the selected page contains two or more tab pages, press the nearest [F1]–[F7] key below the tabs to select the desired page.

note Other ways to select a page

- You can also move to the desired page by holding down the [MENU] key and using numeric keys [0]–[9] to enter a two-digit page number. For example if you wish to access the 5.3: Ed-LFOs page, hold down the [MENU] key and consecutively press numeric keys [5] and then [3].
- By holding down the [MENU] key and using the cursor keys [◄](–) or [►](+), you can step through the pages forward or backward in the order of 1.1→2.1→2.2→3.1, etc.



Play	1.1: Play	Select and play programs. Use the Performance Editor for easy editing, and to do simple editing of arpeggio patterns. (☞p.1)
Basic	2.1: Ed-Basic	Set basic program parameters such as Oscillator and Multisample. (☞p.5)
Ctrl	2.2: Ed-Ctrl	Controller settings. (☞p.9)
Pitch	3.1: Ed-Pitch	Pitch settings. Pitch EG settings. (☞p.10)
Flt1	4.1: Ed-Filter1	Filter 1 (tone) settings. Filter EG settings. (☞p.13)
Flt2	4.2: Ed-Filter2	Filter 2 (tone) settings. Filter EG settings. (☞p.18)
Amp1	5.1: Ed-Amp1	Amp 1 (volume) settings. Amp EG, pan (position) settings. (☞p.18)
Amp2	5.2: Ed-Amp2	Amp 2 (volume) settings. Amp EG, pan (position) settings. (☞p.22)
LFO	5.3: Ed-LFOs	Type and speed settings etc. for the two LFOs provided for each oscillator. (Make settings in the pitch, filter, and amp pages to specify the depth of the LFO settings you make here.) (☞p.22)
Arp	6.1: Ed-Arp.	Arpeggiator settings. (Shared with 1.1: Play parameters. You may edit either.) (☞p.24)
IFX	7.1: Ed-InsertFX	Select the BUS and master effect send level for the oscillator output. Insert Effect routing, selection and settings. (☞p.26)
MFX	7.2: Ed-MasterFX	Master Effect selection and settings. Master EQ settings. (☞p.28)

PROG 1.1: Play

In this display page you can select and play programs.

MIDI All MIDI data in PROG 1.1: Play is transmitted and received on the Global MIDI Channel (☞GLOBAL 2.1–1a).

1.1–1: Program

1.1–1a: Bank, Program Select, Category, Cat. Hold, 10's Hold, ♩(Tempo)

Bank **[Bank A...D, G, g(d)]**

This is the program bank display.
Use the BANK [A]–[GM] keys to select the bank.
Bank G will toggle between the GM and g(d) banks each time you press the BANK [GM] key.

G→g(d)→G→g(d)→G…

The TRITON Le provides rewritable banks **A**, **B**, **C**, and **D**, each containing 128 programs (total 512). As for non-rewritable program areas, it provides banks **G** (capital programs for GM), and bank **g(d)** (drums). (☞For a list of the factory-set programs, refer to the separate VNL.)

Bank A	for preloaded programs
Bank B	
Bank C	
Bank D000~063	
Bank D064~127	For user programs (programs that use multisamples created in Sampling mode (when the separately sold EXB-SMPL option is installed))
Bank G	GM capital program
Bank g(d)	GM drums program

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Program Select
[(A…D)0…127: name, (G, g(d))1…128: name]

Selects a program.
Choose this parameter, and use the [INC], [DEC] keys, numeric keys [0]–[9], or the [VALUE] dial to select a program.
You can select programs by category, or by using “10’s Hold.” (☞“Category,” “Cat. HOLD,” “10’s HOLD”)

MIDI You can receive MIDI program changes from a connected external MIDI device, or use a foot switch to select programs. (☞p.125 “Foot SW Assign” (GLOBAL 1.1–3a), p.222 “Foot Switch Assign List”)

Category [00...15: Name]

Selects the program category.
All programs are classified into one of sixteen categories. You can select the desired category, and then choose programs from that category.
For the procedure of selecting programs from a category, refer to “Cat. HOLD” and “Select by Category.”

note To assign a category to each program, use the “Write Program” (1.1–1c) dialog box. To change the name of a category, use “Category Name Prog. 00–07, 08–15” (☞GLOBAL 4.1–1 / 2).

Cat. HOLD (Category Hold)

① Press the [. / HOLD] key to display [Cat. HOLD]. The category will be held (fixed).

② Use “Category” to select the desired category.

③ Choose “Program Select,” and use the [INC], [DEC] keys or the [VALUE] dial to select programs sequentially within the specified category.

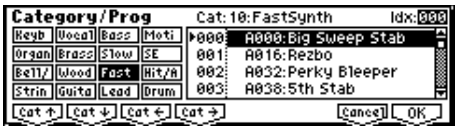
④ To cancel, press the [. / HOLD] key twice to turn off the [Cat. HOLD] display.

note If you press the [. / HOLD] key in PROG 1.1: Play, the selection will cycle in the order of [Cat. HOLD] → [10's HOLD] → Cancel.

Select by Category

① Press the [F8] (“UTILITY”) key to access the Utility menu.

② Press the [F7] key or use the cursor [▲] / [▼] keys to select “Select by Category,” and press the [F8] (“OK”) key. The Select Program by Category dialog box will appear.



note You can directly access the Category dialog box by pressing the [CATEGORY] key. (☞BG p.21)

③ Press the [F1] (“[Cat↑]”), [F2] (“[Cat↓]”), [F3] (“[Cat←]”), or [F4] (“[Cat→]”) keys to select the category that includes the program.
Alternatively, you can use the cursor [◄] / [►] keys to select “Cat:,” and use the [INC] / [DEC] keys or the [VALUE] dial to select the category.

④ Use the cursor [▲] / [▼] keys to select a program in the list. Alternatively, use the cursor [◄] / [►] keys to select “Idx:” and then use the [INC] / [DEC] keys or the [VALUE] dial to select the program.

⑤ To execute, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

10’s HOLD

① Press the [. / HOLD] key twice to display [10's HOLD]. The first digit of the program number will be held (fixed).

② When you press a numeric key [0]–[9], the second digit of the program number will be input with a single action.

③ You can use the [INC], [DEC] keys to change the first digit.

④ To cancel, press the [. / HOLD] key to turn off the [10's HOLD] display.

♩ (Tempo) [040...240, EXT]

This sets the tempo of the arpeggiator. The tempo can also be adjusted by the REALTIME CONTROLS C-mode [TEMPO] knob.
A display of **EXT** indicates that the “MIDI Clock” (GLOBAL 2.1–1a) setting has been set to **External**, and that the arpeggiator will synchronize to MIDI Clock messages received from an external MIDI device.
This parameter can also be set from 6.1: Ed-Arp.

1.1–1b: Program Information

This display shows the functions that are assigned to the [SW1] key, [SW2] key, and REALTIME CONTROLS B-mode [ASSIGNABLE 1]–[ASSIGNABLE 4] knobs for the selected program.

■ 1.1–1c: UTILITY

Use the following procedure to select the desired utility.

① Press the [F8] (“UTILITY”) key to access the Utility menu.

② Press the [F7] key or the cursor keys [▲], [◄], [▼], [►] to select the desired utility.

③ Press the [F8] (“OK”) key to access the dialog box.

note Utilities up to number 10 can also be selected by holding down the [ENTER] key and pressing the corresponding numeric key [0]–[9] to access the dialog box.

Write Program

If you wish to save a program, be sure to write it into the memory of the TRITON Le.
An edited program cannot be recovered if you do not write it to memory before turning off the power or selecting another program.

① Select “Write Program” to access the dialog box.

② The upper line shows the bank, program number and program name.

③ In “Category,” specify the category of the program that you are writing. With the factory settings, the program categories have been given the names of instruments etc., but you can use “Category Name Prog.00–07, 08–15” (GLOBAL 4.1–1 / 2) to modify these category names. The category selected here can be used to find this program when selecting a program in Program, Combination, Sequencer.

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④ Press “To” to specify the writing destination.

note You can also use the Bank [A]–[D] keys to select a bank.

It is not possible to write to banks G, g(d). If you have edited a program from banks G, g(d) and wish to write it, you must write to banks A–D.

⑤ If you wish to change the program name, press the [F5] (“Name”) key to move to the text dialog box, and input the name. (☞BG p.43)

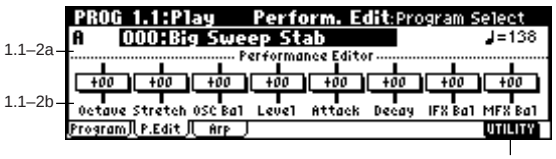
⑥ To write the program, press the [F8] (“OK”) key. To cancel without writing, press the [F7] (“Cancel”) key.

note When you press the [REC / WRITE] key, the Update Program dialog box will appear. Here too, you can write to the currently selected program.

Select by Category

Here you can select a program by category. (☞p.2)

1.1–2: P.Edit (Performance Editor)



1.1–2a: Bank, Program Select, ♩(Tempo)

Select a program. The bank, number, and name of the program will be displayed (☞p.1). “♩” sets the tempo.

1.1–2b: Performance Editor

The Performance Editor lets you edit major program parameters without moving to the PROG 2.1–7.2 Ed (Edit) pages. This edits multiple program parameters within the currently selected program, allowing you to make broad adjustments easily.
You can use the **Performance Editor** when you wish to adjust the depth of effects etc. while you are playing, or to make the initial rough settings to begin the process of creating a new sound.
Editing that you do here will affect the values of the program parameters in the edit buffer.
If you wish to keep the results of your editing, you must write (save) the program (☞BG p.42).

Editing done using the Performance Editor will occur within the range of the corresponding parameter. If after using the Performance Editor to modify a value, you move to another page or mode and then return, the sound will remain in its edited state but the value shown in the LCD screen by the Performance Editor will be **+00**. You may do further editing from this state if you wish.
Since editing done using the Performance Editor is not as detailed as conventional editing, the balance between parameters may be lost. If this occurs, use 2.1: Ed-Basic–7.2: Ed-MasterFx to make fine adjustments.

MIDI If the MIDI Filter “Exclusive” (GLOBAL 2.1–1b) setting is **checked**, MIDI exclusive parameter changes will be transmitted whenever you operate the Performance Editor. If these messages are received by an instrument whose “Exclusive” setting is **checked**, the Performance Editor on that instrument corresponding to the received message will be modified.

Octave [–03...+00...+03]

An adjustment of **+01** will raise the pitch one octave.
An adjustment of **–01** will lower the pitch one octave.
This setting cannot adjust the pitch higher than 4' (feet) or lower than 32' (feet).

Stretch (Pitch Stretch) [–12...+00...+12]

This simultaneously adjusts the Transpose and Tune of the oscillator. This lets you produce a variety of tonal changes and variations without loosing the character of the original sound.
At the **+00** setting, the value of the program parameters will be unchanged.
An adjustment of **+01** will lower the Transpose value by 1, and simultaneously raise the Tune value by 100.
An adjustment of **–01** will raise the Transpose value by 1, and simultaneously lower the Tune value by 100.
However, it is not possible for the Transpose value to exceed the range of ±12, nor the Tune value to exceed the range of ±1200.

OSC Bal (OSC Balance) [–10...+00...+10]

This adjusts the level balance between oscillators 1 and 2.
At the **+00** setting, the value of the program parameters will be unchanged.
Positive (+), settings will lower the oscillator 2 level.
With an adjustment of **+10**, the oscillator 2 level will be 0.
The oscillator 1 level will not change.
Negative (–) settings will lower the oscillator 1 level.
With an adjustment of **–10**, the oscillator 1 level will be 0.
The oscillator 2 level will not change.

For programs whose “Mode (Oscillator Mode)” (2.1–1a) setting is **Single**, oscillator 2 will not sound. Only the level of oscillator 1 will change. For a **Drums** program, this performance editor will have no effect.

Level (Amp Level) [–10...+00...+10]

This adjusts the amp level.
With an adjustment of **+00**, the value of the program parameters will be unchanged.
Positive (+) settings will increase the amp level above the value that was set.
With an adjustment of **+10**, the amp level will be 127 (maximum).
Negative (–) settings will lower the amp level below the value that was set.
With an adjustment of **–10**, the amp level will be 0.

Attack (Attack Time) [–10...+00...+10]

This adjusts the attack times of the filter EG and amp EG.
With an adjustment of **+00**, the value of the program parameters will be unchanged.
Positive (+) settings will lengthen the attack times beyond the values that were set.
With an adjustment of **+10**, the attack times will be 90.
Negative (–) settings will shorten the attack times.
With an adjustment of **–10**, the attack times will be 0.

When you modify “Attack Time,” the EG Start Level, Attack Level, Start Level Modulation, and Attack Time Modulation of the amp EG will also be adjusted simultaneously, to allow the maximum effect to be obtained.

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Decay (Decay Time) [–10…+00…+10]

This adjusts the Decay Time and Slope Time of the filter EG and amp EG.
With an adjustment of **+00**, the value of the program parameters will be unchanged.
Positive (+) settings will lengthen the Decay Time and Slope Time beyond the values that were set. With an adjustment of **+10**, the times will be 99.
Negative (–) settings will shorten the Decay Time and Slope Time. With an adjustment of **–10**, the times will be 0.

IFX Bal (IFX Balance) [–10…+00…+10]

This adjusts the "W / D(Wet / Dry)" setting of the insertion effect.
With an adjustment of **+00**, the value of the program parameters will be unchanged.
Positive (+) settings will raise the Wet level above the program setting, and lower the Dry level. With an adjustment of **+10**, the setting will be "Wet" - the effected signal only.
Negative (–) settings will lower the Wet level below the program setting, and raise the Dry level. With an adjustment of **–10**, the setting will be "Dry" - the signal is unaffected.

MFX Bal (MFX Balance) [–10…+00…+10]

This adjusts the master effect "Rtn1 (Return1)" and "Rtn2 (Return2)" (7.2–1a) settings as a whole.
With an adjustment of **+00**, the value of the program parameters will be unchanged.
Positive (+) settings will raise the return levels above the program setting.
With an adjustment of **+10**, the setting will be 127 (maximum).
Negative (–) settings will lower the return levels below the program setting.
With an adjustment of **–10**, the setting will be 0.

Octave	Octave of OSC 1 and 2
Stretch	Transpose and Tune of OSC 1 and 2
OSC Bal	High Level and Low Level of OSC1 and 2
Level	Amp1 Level, Amp2 Level
Attack	Amp EG Attack Time, Start Level, Attack Level, Level Modulation S, Time Modulation A of Amp 1 and 2, and Filter EG Attack Time of Filter 1 and 2
Decay	AmpEG Decay Time, Slope Time of Amp 1 and 2, Filter EG Decay Time and Slope Time of Filter 1 and 2
IFX Bal	W/D (Wet/Dry) balance of the IFX effect
MFX Bal	Master Effect RTN1, 2 (Return1, 2)

■ 1.1–2c: UTILITY

☞"Write Program," "Select by Category" (1.1–1c)

1.1–3: Arp (Arp. Play)

While arpeggiator parameters are for the most part edited in PROG 6.1: Ed-Arp., Some major parameters can be edited here as well. When you are playing in PROG 1.1: Play, you can edit the arpeggiator in realtime, such as changing the arpeggio pattern etc.
You can also use the REALTIME CONTROLS C-mode [TEMPO], [ARP-GATE], and [ARP-VELOCITY] knobs to edit the arpeggio in realtime (☞BG p.27).

1.1–3a: Arpeggiator

Pattern **[P000...P004, U000(INT)...U215(User)]**
Reso (Resolution) **[$\mathfrak{3}$, $\mathfrak{3}$, $\mathfrak{3}$, $\mathfrak{3}$, $\mathfrak{3}$, $\mathfrak{3}$]**
Octave **[1, 2, 3, 4]**
Sort **[Off, On]**
Latch **[Off, On]**
Key Sync. **[Off, On]**
Keyboard **[Off, On]**

Make settings for the program arpeggiator (☞"PROG: Ed-Arp."). These parameters can also be set from 6.1: Ed-Arp. setup page (☞6.1–1a).

■ 1.1–3b: UTILITY

☞"Write Program," "Select by Category" (1.1–1c)

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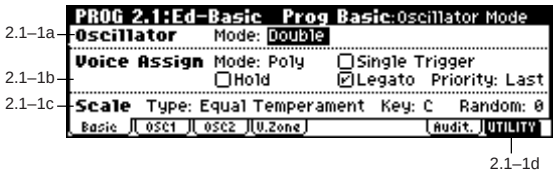
PROG 2.1: Ed–Basic

Here you can make basic settings for the oscillator(s).

2.1–1: Basic (Prog Basic)



2.1–1a: Oscillator

Mode (Oscillator Mode) [Single, Double, Drums]

Specifies the basic program type; whether it will use one or two oscillators, or a drum kit.

Single: The program will use **one oscillator** (Oscillator 1, Filter 1, Amplifier 1). In this case the program will have a **maximum of 62-note polyphony**.

Double: The program will use **two oscillators** (Oscillator 1/2, Filter 1/2, Amplifier 1/2). Allowing you to create more complex sounds. In this case the program will have a **maximum of 31-note polyphony**.

Drums: The program will use **one oscillator** (as when **Single** is selected), but Oscillator 1 will be assigned a drum kit instead of a multisample. In this case the program will have a **maximum of 62-note polyphony**.

2.1–1b: Voice Assign

Mode (Voice Assign Mode) [Poly, Mono]

Poly: The program will play polyphonically, allowing you play chords.
Mono: The program will play monophonically, producing only one note at a time.

Hold [Off, On]

On (checked): Hold is **On**. Even when you take your finger off of the key, the note will continue sounding as if it continued to be held. Unless the "Amp1 EG", "Amp2 EG" (5.1–3a, 5.2–3) "S (Sustain Level)" is set to **0**, the sound will continue playing.
This is ideal for playing drum sounds, If you set "Mode (Oscillator Mode)" (2.1–1a) to **Drums**, you should **normally**-turn **Hold On**.
Off (unchecked): Hold is **Off**. Except for drum programs, you should normally set **Hold Off**.

If you turn "Hold" **On** for a drum program, keys of the selected drum kit whose "Enable Note Off" parameter (GLOBAL 5.1–3a) is unchecked will be set to **Hold On**. Keys that are checked will be set to Hold Off. If you select **Hold Off**, the keys will be set to Hold Off regardless of their "Enable Note Off" setting.

Single Trigger [Off, On]

This is available when the "Mode (Voice Assign Mode)" setting is set to **Poly**.

On (checked): When the same note is played repeatedly, the previous note will be silenced before the next note is sounded, so that the notes do not overlap.

Legato [Off, On]

This is available when the "Mode (Voice Assign Mode)" setting is set to **Mono**.

On (checked): Legato is on. When multiple note-on messages occur, the first note-on will retrigger the sound, and the second and subsequent note-ons will not retrigger.
When legato is on, multiple note-on message will not retrigger the voice. If one note is already on and another note is turned on, the oscillator sound, envelope, and LFO will not be reset, and only the pitch of the oscillator will be updated. This setting is effective for wind instrument sounds and analog synth-type sounds.
Off (unchecked): Legato is off. Notes will always be retriggered when note-on occurs.
When legato is off, multiple note-on's will retrigger the voice at each note-on. The oscillator sound, envelope, and LFO will be reset (and retriggered) according to the settings of the program.

If "Legato" is **checked**, certain multisamples or keyboard locations may produce an incorrect pitch.

Priority [Low, High, Last]

This parameter is valid when "Mode (Voice Assign Mode)" is set to **Mono**.
It specifies which note will be given priority to play when two or more notes are played simultaneously.

Low: Lowest note will take priority.
High: Highest note will take priority.
Last: Last note will take priority.

2.1–1c: Scale

Type (Scale Type) [Equal Temperament…User Octave 15]

Indicates the basic scale for the internal tone generator.

Equal Temperament: This is the most widely used scale, where each semitone step is spaced at equal pitch intervals.

Pure Major: In this temperament, major chords of the selected tonic will be perfectly in tune.

Pure Minor: In this temperament, minor chords of the selected tonic will be perfectly in tune.

Arabic: This scale includes the quarter-tone scale used in Arabic music.

Pythagoras: This scale is based on ancient Greek musical theory, and is especially effective for playing melodies.

Werkmeister (Werkmeister III)**:** This is an equal tempered scale that was used since the later Baroque period.

Kirnberger (Kirnberger III)**:** This scale was created in the 18th century, and is used mainly to tune harpsichords.

Slendro: This is an Indonesian gamelan scale in which an octave consists of five notes.
When "Key" is set to **C**, use the C, D, F, G and A notes. (Other keys will sound equal-tempered pitches.)

Pelog: This is an Indonesian gamelan scale in which an octave consists of seven notes.
When "Key" is set to **C**, use the white keys. (The black keys will sound the equal tempered pitches.)

Stretch: This tuning is used for acoustic pianos.

User All Notes: This is the full-range scale (C–1 – G9) that is specified in "User All Notes Scale" (GLOBAL 3.1–2a).

User Octave 00–15: These are the single-octave scales that are specified in "User Octave Scale" (GLOBAL 3.1–1a).

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Key [C…B]

Indicates the tonic note of the specified scale.
This setting is not valid for **Equal Temperament**, **Stretch**, and **User All Notes Scale**.

Random [0…7]

As this **value is increased**, a greater variance will be applied to the pitch when each note is sounded. Normally you will set this to **0**. This parameter is used when simulating instruments that have natural instability in pitch, such as tape-mechanism organs or acoustic instruments.

If a scale other than Equal Temperament is selected, the combination of the selected scale and the "Key" setting may skew the tuning of the base key (for example A=440 Hz). If this occurs, use "Master Tune" (GLOBAL 1.1–1a) to correct the pitch.

■ 2.1–1d: UTILITY

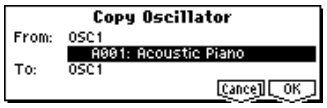
☞"Write Program" (1.1–1c)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Copy Oscillator

This function copies oscillator settings to the currently selected program.

① Select "Copy Oscillator" to access the dialog box.



② In "From," select the oscillator that you wish to copy and the copy source program. You can use the Bank [A]–[GM] keys to select the bank.

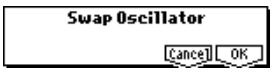
③ In "To," select the copy destination oscillator.

④ To execute the Copy Oscillator operation, press [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Swap Oscillator

This command exchanges the settings of oscillators 1 and 2.

① Select "Swap Oscillator" to access the dialog box.



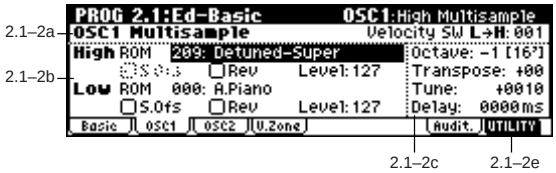
② To execute the Swap Oscillator operation, press [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

note This can be selected only if "Mode (Oscillator Mode)" (2.1–1a) is **Double**.

2.1–2: OSC1

The multisample(s) (waveform) or drum kit on which the program will be based can be selected here for oscillator 1 and / or oscillator 2.
The internal ROM contains **425** different multisamples (preset multisamples) and **33** drum kits. RAM multisamples can be created in Sampling mode if the EXB-SMPL option (sold separately) is installed, or you can use multisamples that were loaded in using the Media mode.

The following illustration shows a LCD screen where "Mode (Oscillator Mode)" (2.1–1a) has been set to **Double**. If this is set to **Single**, the OSC2 page parameter will not appear and cannot be set.



The following illustration shows the display when "Mode (Oscillator Mode)" (2.1–1a) has been set to **Drums**.

2.1–2a: OSC1 Multisample

Velocity SW L→H [001...127]

The oscillator 1 High and Low multisamples that you specify in "High, Low" (2.1–2b) will be switched at the velocity value that you specify here. Notes played with a velocity stronger than this value will be sounded by the High multisample.

2.1–2b: High, Low

Here you can select a multisample.
You can select different multisamples for High and Low, and use velocity to switch between the two multisamples. Start Offset, Reverse, and Level can be adjusted independently for the High and Low multisamples.

High:

High MS Bank [ROM, RAM]

High Multisample [000...424, 000...999]

Specifies the bank and multisample number of the High multisample. The multisample you select here will sounded by velocities greater than the value of the "**Velocity SW L→H**" (2.1–2a) parameter. If you do not wish to use velocity switching, set the value to **001**, and select only the **High** multisample.
ROM: Select a preset multisample.
Use "**High Multisample**" to select from **000–424**.
RAM: You can use multisamples that you created in Sampling mode, or multisamples that you loaded in the Media mode. (Requires the separately sold EXB-SMPL option and / or the installation of RAM sample data memory.)
Select the "**High Multisample**" from a range of **000–999**.

If sample data RAM is not installed, the program will not sound if you select RAM.

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Each multisample has an upper limit, and may not produce sound when played above that limit.

S.Ofs (High Start Offset) [Off, On]

This specifies the point at which the multisample will begin sounding. For some multisamples this parameter will have no effect.

On (checked): The sound will start from the start offset location that is pre-determined for each multisample. However when a RAM bank is selected, this will depend on the selected multisample. If you select a multisample that includes one of the following types of sample, **checking** this item will cause playback to start from the Loop Start Address.

- A sample that was recorded (sampled) in Sampling mode (if the separately sold EXB-SMPL option is installed)
- A sample whose Loop Start Address was edited in Sampling mode (if the EXB-SMPL option is installed) after the sample was loaded in Media mode
- A sample whose Loop Start Address was specified automatically when it was loaded as an AKAI, AIFF, or WAVE file in Media mode

Off (unchecked): The sound will start from the beginning of the multisample waveform.

Rev (High Reverse) [Off, On]

The multisample will be played in reverse. In the case of ROM multisamples that were originally specified to loop, or in the case of RAM multisamples that were set to loop in Sampling mode (if the EXB-SMPL option is installed), the multisample will be played back in "one-shot" reverse mode. If the multisample was originally set to reverse, it will playback without change.

On (checked): The multisample will playback in reverse.
Off (unchecked): The multisample will playback normally.

Level (High Level) [000...127]

Specifies the level of the multisample.

Depending on the multisample, high settings of this parameter may cause the sound to distort when a chord is played. If this occurs, lower the level.

Low:

Specifies the OSC1 Low multisample.
The Low multisample will sound when the velocity is less than the "Velocity SW L→H" (2.1–2a) setting.

Low MS Bank [ROM, RAM]
Low Multisample [000...424, 000...999]
S.Ofs (Low Start Offset) [Off, On]
Rev (Low Reverse) [Off, On]
Level (Low Level) [000...127]

☞Refer to the corresponding item in "High."

2.1–2c: Octave, Transpose, Tune, Delay

Octave [–2[32'], –1[16'], +0[8'], +1[4']]

Adjusts the pitch in octave units. The normal octave of the multisample is **8'** (feet).

Transpose [–12...+12]

Adjusts the pitch in semitone steps over a range of ±1 octave.

Tune [–1200...+1200]

Adjusts the pitch of the sample in one-cent steps (a semitone is 100 cents) over a range of ±1 octave.

Delay [0ms...5000ms, KeyOff]

Specifies a delay time from note-on until the note will sound.
With a setting of **KeyOff**, the sound will begin when note-off occurs. This is used to create sounds such as the "click" that is heard when a harpsichord note is released. In this case, set the "Amp1 EG", "Amp2 EG" (5.1–3a, 5.2–3) "S (Sustain Level)" parameter to **0**.

2.1–2d: OSC1 Drum Kit

Drum Kit [00(INT)...15(INT), 16(User)...23(User), 24(GM)...32(GM)]

Select a drum kit.

00 (INT)–15 (INT)	Preload drum kits.
16 (User)–23 (User)	for user drum kits
24 (GM)–32 (GM)	ROM preset drum kits compatible with GM2.

Octave [–2[32'], –1[16'], +0[8'], +1[4']]

Adjusts the pitch in octave units. When using a drum kit, set the Octave to **8'**.

When editing a drum program, you must set this parameter to **8'**. With other settings, the sounds of the drum kit will be assigned to the wrong notes of the keyboard.

Transpose [–12...+12]

This adjusts the location of the instruments in the selected drum kit. Unless you need to change this, leave it at **0**.

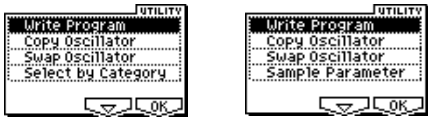
Tune [–1200...+1200]

This adjusts the pitch in one-cent units.
The pitch of each drum kit can be adjusted in GLOBAL 5.1: DKit.

Delay [0ms...5000ms, KeyOff]

This specifies a delay time from note-on until the sound will begin.
With a setting of **KeyOff**, the sound will begin when note-off occurs. In this case, set the "Amp1 EG" parameter "S (Sustain Level)" (5.1–3a) to **0**.

■ 2.1–2e. UTILITY



☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Select by Category

Selects multisamples by category.

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For the procedure, refer to “Select by Category” (☞p.2).

note This command is valid when the 2.1–2b: High, Low parameters are selected under the following conditions.

- “Mode (Oscillator Mode)” (2.1–1a) is set to either **Single** or **Double**
- “High MS Bank” and “Low MS Bank” (2.1–2b) are set to **ROM**

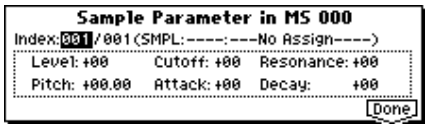
Sample Parameters

This is displayed and can be edited if the EXB-SMPL option is installed.
This command lets you adjust the sample playback level, cutoff, resonance, pitch, attack, and decay for each index of a RAM multisample.

note This command is valid if “Mode (Oscillator Mode)” (2.1–1a) is set to **Single** or **Double**, and you have selected the 2.1–2b: High or Low parameters of OSC1 or OSC2 for which **RAM** has been specified as the “High MS Bank” or “Low MS Bank.”

The setting will apply to the selected multisample. The setting will also be used when that multisample is selected by another oscillator or program.

① Select “Sample Parameters” to access the dialog box.



② **Index:** Specifies the index for which you wish to make settings. The number following “ / ” is the total number of indexes in the selected multisample.
SMPL: Indicates the sample number and name for the index.

③ For each index, you can make the following settings.
Level: Adjusts the volume. Relative to the settings of “Level (High, Low Level)” (2.1–2b) and “Level (Amp1, 2 Level)” (5.1–1a, 5.2–1), **negative (–) values** will decrease the levels, and **positive (+) values** will increase the levels. A setting of **+99** will double the volume, and at a setting of **–99** there will be no sound. This parameter is linked to the “Level” (SMPL 4.1–2a). The value that was specified in Sampling mode will be displayed here.
Cutoff: Adjusts the filter cutoff. This adjustment will be added to the value specified for “Frequency” (4.1–1b / 1c, 4.2–1) of Filter 1 and 2.
Resonance: Adjusts the resonance level of the filter. This adjustment will be added to the value specified for “Resonance” (4.1–1b, 4.2–1) of Filter 1 and 2.
Pitch: Adjusts the playback pitch in one-cent steps. A setting of **+12.00** raises the pitch one octave, and a setting of **–12.00** will lower the pitch one octave. This parameter is linked with the parameter “Pitch” (SMPL 4.1–2a). The value that was specified in Sampling mode will be displayed here.
Attack: Adjust sthe attack times of the filter EG and amp EG. This adjustment will be added to the “A (Attack Time)” of “Filter 1 EG,” “Filter 2 EG,” “Amp 1 EG,” and “Amp 2 EG” (4.1–5a, 4.2–5, 5.1–3a, 5.2–3).
Decay: Adjusts the decay times of the filter EG and amp EG. This adjustment will be added to the “D (Decay Time)” of “Filter 1 EG,” “Filter 2 EG,” “Amp 1 EG,” and “Amp 2 EG.”

④ Press the [F8] (“Done”) key to execute, and close the dialog box.

Please be aware that the Compare function is not available for this command.

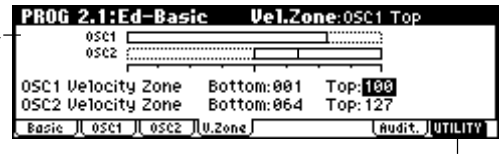
2.1–3: OSC2

This will appear when “Mode (Oscillator Mode)” (2.1–1a) is set to **Double**.
For details on the settings and function of the parameter, refer to “2.1–2: OSC1.”

2.1–4: V.Zone (Velocity Zone)

Specifies the range of velocities that will sound oscillator 1 and 2. By using these settings in conjunction with the “Velocity SW L→H” (2.1–2a) setting of each oscillator, you can specify the velocity ranges for the High and Low multisamples or drum kits.

2.1–4a



2.1–4b

2.1–4a: OSC 1/2 Velocity Zone

OSC1 Bottom **[001...127]**
Sets the minimum velocity value that will sound oscillator 1.

OSC1 Top **[001...127]**
Sets the maximum velocity value that will sound oscillator 1.

OSC2 Bottom **[001...127]**
Sets the minimum velocity value that will sound oscillator 2.

OSC2 Top **[001...127]**
Sets the maximum velocity value that will sound oscillator 2.

It is not possible to set the Bottom Velocity greater than the Top Velocity, nor the Top Velocity less than the Bottom Velocity.

note You can also input a value by playing a note on the keyboard while you hold down the [ENTER] key.

■ 2.1–4b: UTILITY

☞“Write Program” (1.1–1c), “Copy Oscillator,” “Swap Oscillator” (2.1–1d)

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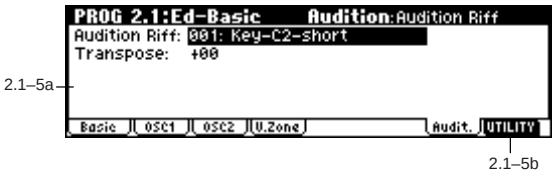
2.1–5: Audit. (Audition)

When selecting preloaded programs, you can play back a pre-specified riff (phrase) that is suitable for the sound of that program. This is called the **Audition** function.
When you press the [AUDITION] key to turn it on, the audition riff will play back repeatedly.

Here you can select the audition riff and specify the transposition.



2.1–5a: Audition Riff, Transpose

Audition Riff **[000: Off...383: Name]**

Selects the audition riff. The TRITON Le contains 383 audition riffs suitable for a variety of instruments and musical genres. (☞"VNL")
With a setting of **000: Off**, no riff will be played.

Transpose **[–24...+24]**

Adjusts the pitch of the audition riff in semitone steps.

It is not possible to change the playback tempo of the audition riff. Nor is it possible to set the arpeggiator tempo while the audition riff is playing.

The arpeggiator will be turned off while the audition riff is playing.

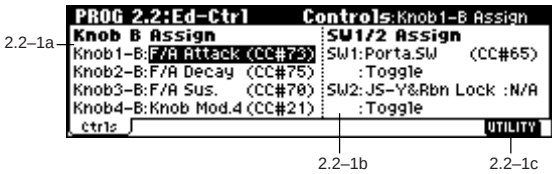
■ 2.1–5b: UTILITY

☞"Write Program" (1.1–1c)

PROG 2.2: Ed–Ctrl

These settings specify the B-mode functions of the REALTIME CONTROLS knobs [1]–[4] in Program mode, and the functions of the [SW1] key, the [SW2] key.

2.2–1: Ctrls (Controls)



2.2–1a: Knob B Assign

Here you can assign functions (mainly various types of control change) to the B-mode of the REALTIME CONTROLS knobs [1]–[4] (☞p.221 "Realtime Control Knobs B Assign List").
The functions you set here will take effect when you operate the REALTIME CONTROLS knobs [1]–[4] in B-mode.

Knob1–B (Knob1–B Assign) AMSource **[Off...MIDI CC#95]**
Knob2–B (Knob2–B Assign) AMSource **[Off...MIDI CC#95]**
Knob3–B (Knob3–B Assign) AMSource **[Off...MIDI CC#95]**
Knob4–B (Knob4–B Assign) AMSource **[Off...MIDI CC#95]**

2.2–1b: SW1/2 Assign

These settings assign functions to [SW1] and [SW2] keys (☞p.220 "SW1, SW2 Assign List").

SW1 Assign AMSource **[Off...AfterT Lock]**

Here you can assign a function to the [SW1] key.
The on/off status of the switch is saved when the program is written. When you change the function, it will be reset to the "off" state.

SW1 Mode **[Toggle, Momentary]**

Specifies the on/off state that will occur when you press the [SW1] key.
Toggle: The key will alternate on/off each time you press [SW1] key.
Momentary: The key will be on only while you continue holding [SW1] key.

SW2 Assign AMSource **[Off...AfterT Lock]**
SW2 Mode **[Toggle, Momentary]**

Here you can assign a function to [SW2] key.
The functions that can be assigned to [SW2] key are the same as for [SW1] key, with the exception of **SW2 Mod. (CC#81)** instead of **SW1 Mod. (CC#80)**.

note Although the following values can be selected for "SW1 Assign" and "SW2 Assign," they will have no effect in actuality.
Data is compatible between this instrument and the TRITON/TRITONpro/TRITONproX and the TRITON-Rack. Programs created on the TRITON series can be used by this instrument.

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In order to maintain compatibility, you are able to set these “invalid” parameters on this instrument.

N/A indicates Not Available.

Ribbon Lock	**: N/A**
JS X&Rbn Lock	**: N/A**
JS+Y&Rbn Lock	**: N/A**
JS-Y&Rbn Lock	**: N/A**

■ 2.2–1c: UTILITY

☞“Write Program” (1.1–1c), “Copy Oscillator,” “Swap Oscillator” (2.1–1d)

PROG 3.1: Ed–Pitch

Here you can make pitch modulation settings for oscillators 1 and 2.

3.1–1: OSC1

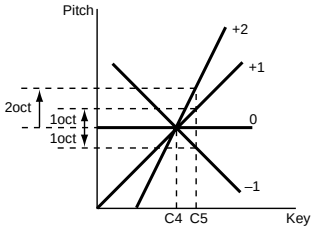
Specifies how the key position (on the keyboard) will affect the pitch of oscillator 1, and selects the controller that will modify the pitch and the depth of this effect. Here you can also specify the amount of pitch change caused by the pitch EG, and set the portamento mode and on / off status.

3.1–1a: Pitch

Pitch Slope [–1.0…+2.0]

Normally you will leave this at **+1.0**.
Positive (+) values will cause the pitch to rise as you play higher on the keyboard, and **negative (–) values** will cause the pitch to fall as you play higher on the keyboard.
With a value of **0**, there will be no change in pitch, and the C4 pitch will sound regardless of the keyboard location you play.

How the Pitch Slope and pitch are related



Ribbon (#16) [–12…+12]

Specifies in semitone units how the pitch will change when CC#16 is received (or when the ribbon controller is pressed on an instrument, such as the TRITON, connected via the MIDI IN connector).

12 half-steps equal one octave. With positive **(+) values**, the pitch will rise when you press the right half of a ribbon controller. With negative **(–) values**, the pitch will fall.

For example, with a setting of **+12**, pressing the far right edge of the ribbon controller will raise the pitch one octave. With a setting of **–12**, pressing the far right edge of the ribbon controller will lower the pitch one octave.
At the center of the ribbon controller, the original pitch will remain, so you can use this in conjunction with pressing the ribbon at its right edge to simulate the “hammering-on” techniques used by guitarists.

JS (+X) [–60…+12]

Specifies how the pitch will change when the joystick is moved all the way to the right.
A setting of **12** produces 1 octave of change.

For example, if you set this to **+12** and move the joystick all the way to the right, the pitch will rise one octave above the original pitch.

JS (–X) [–60…+12]

Specifies how the pitch will change when the joystick is moved all the way to the left.
A setting of **12** produces 1 octave of change.

For example, if you set this to **–60** and move the joystick all the way to the left, the pitch will fall five octaves below the original pitch. This can be used to simulate the downward swoops that a guitarist produces using the tremolo arm.

AMS (Pitch AMS) [Off, (FEG, AEG, EXT)]

Selects the source that will modulate the pitch of oscillator 1 (☞p.212 “AMS List”).

Intensity (AMS Intensity) [–12.00…+12.00]

Specifies the depth and direction of the effect produced by “AMS (Pitch AMS).”
With a setting of **0**, no modulation will be applied. With a setting of **12.00**, the pitch will change up to one octave.

For example if you set “AMS” to **AfterT** and apply pressure to the keyboard, the pitch will rise if this parameter is set to a **positive (+) value**, or fall if this parameter is set to a **negative (–) value**. The range is a maximum of one octave. (☞p.214)

3.1–1b: Pitch EG

Intensity [–12.00…+12.00]

Specifies the depth and direction of the modulation that the pitch EG specified in “EG (Pitch EG)” (3.1–5) page will apply to the pitch.
With a setting of **12.00**, the pitch will change a maximum of ±1 octave.

AMS (Pitch EG AMS) [Off, (KT, EXT)]

Selects the source that will control the pitch modulation applied by the pitch EG (☞p.212 “AMS List”).

Intensity (AMS Intensity) [–12.00…+12.00]

Specifies the depth and direction of the effect that “AMS (Pitch EG AMS)” will have.
For example, if you set “AMS (Pitch EG AMS)” to **Velocity** and set this value to **+12.00**, the velocity will control the

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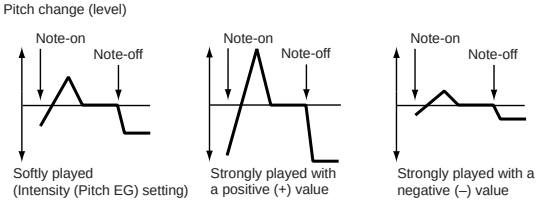
range of pitch change produced by the pitch EG in a range of ±1 octave (☞p.214). As you play more softly, the pitch change will draw closer to the pitch EG levels.



note "Intensity" and "AMS (Pitch EG AMS)" will be summed to determine the depth and direction of the pitch modulation applied by the pitch EG.

3.1–1c: Portamento

This turns the portamento effect (smooth change in pitch from one note to the next) on / off, and specifies how it will be applied. If [SW 1] or [SW2] are set to **Porta.SW(CC#65)**, turning SW1 or SW2 on / off will apply portamento (☞p.212 "AMS List," p.220 "SW1, SW2 Assign List," Prta.SWCC#65).

MIDI Portamento will also be switched when CC#65 (Portamento SW) is received.

Enable (Porta. Enable) **[Off, On]**

On (checked): Portamento will be applied.
Off (unchecked): Portamento will not be applied.

Fingered (Porta. Fingered) **[Off, On]**

This parameter is available when "Enable (Porta. Enable)" is checked.

On (checked): Portamento will be applied when you continue holding the previous note as you press the next note (legato playing).
Off (unchecked): Portamento will always be applied, regardless of how you play.

Time (Porta. Time) **[000...127]**

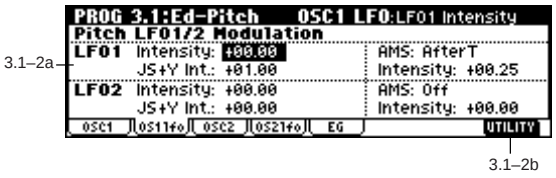
This parameter is available when "Enable (Porta. Enable)" is checked.
This sets the portamento time. Increasing the value will produce a slower change in pitch.

■ 3.1–1d: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

3.1–2: OS1lfo (OSC1 LFO)

Specifies the amount of pitch change produced by LFO1 and LFO2 for oscillator 1.



3.1–2a: Pitch LFO1 / 2 Modulation

LFO1:

Intensity (LFO1 Intensity) **[–12.00…+12.00]**

Specifies the depth and direction of the pitch modulation applied by the OSC 1 LFO1 settings you made in "OS1LFO1" page (5.3–1).
With a setting of **12.00**, a maximum of ±1 octave of pitch modulation will be applied. **Negative (–) values** will invert the LFO waveform.

JS+Y Int. (LFO1 JS+Y Int.) **[–12.00…+12.00]**

Specifies the depth and direction of the effect that joystick movement in the +Y direction (away from yourself) will have on the pitch modulation applied by the OSC1 LFO1. As this **value is increased**, moving the joystick in the +Y direction will cause the OSC1 LFO1 to produce deeper pitch modulation. With a setting of **12.00** a maximum of ±1 octave of pitch modulation will be applied. **Negative (–) values** will invert the LFO waveform.

AMS (LFO1 AMS) **[Off, (PEG, FEG, AEG, KT, EXT)]**

Indicates the source that will control the depth of pitch modulation produced by the OSC1 LFO1 (☞p.212 "AMS List").

Intensity (AMS Intensity) **[–12.00…+12.00]**

Specifies the depth and direction of the effect that "AMS (LFO1 AMS)" will have.
With a setting of **0**, modulation will not be applied. With a setting of **12.00**, the OSC1 LFO1 will apply a maximum of ±1 octave of pitch modulation. **Negative (–)** settings will invert the LFO waveform.
For example if "AMS" is set to **AfterT** and you apply pressure to the keyboard, a **positive (+)** setting of this parameter will cause the pitch modulation created by OSC1 LFO1 to be applied with the normal phase, and a **negative (–)** setting will cause the LFO to be applied with inverted phase.
The "Intensity (LFO1 Intensity)," "JS+Y Int. (LFO1 JS+Y Int.)" and "AMS (LFO1 AMS)" settings will be added to determine the depth and direction of the pitch modulation applied by OSC1 LFO1 (☞p.214).

LFO2:

Intensity (LFO2 Intensity) **[–12.00…+12.00]**
JS+Y Int. (LFO2 JS+Y Int.) **[–12.00…+12.00]**
AMS (LFO2 AMS) **[Off, (PEG, FEG, AEG, KT, EXT)]**
Intensity (AMS Intensity) **[–12.00…+12.00]**

Refer to the preceding section "LFO1."

■ 3.1–2b: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

3.1–3: OSC2

Specifies how the key position (on the keyboard) will affect the pitch of oscillator 2, and selects the controller that will affect the pitch and specify the depth of control. Here you can also specify the amount of pitch change produced by the pitch EG, and set the portamento mode and on / off status. For details on each parameter, refer to the preceding "3.1–1: OSC1."

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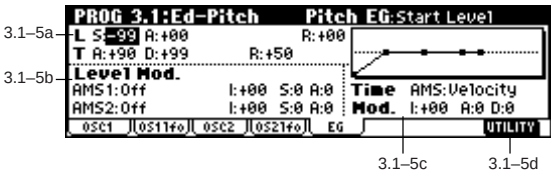
3.1–4: OS2lfo (OSC2 LFO)

Specifies the amount of pitch change produced by LFO1 and LFO2 for oscillator 1. For an explanation of each parameter, refer to the preceding “3.1–2: OS1lfo.”

3.1–5: EG (Pitch EG) AMSource

Here you can make settings for the pitch EG, which creates time-variant changes in the pitch of oscillators 1 and 2.
The depth of pitch change produced by these EG settings on oscillator 1 (2) is adjusted by “Pitch EG” (3.1–1b, 3.1–3).



3.1–5a: Pitch EG

These settings specify how the pitch will change over time.

L (Level):

These parameters specify the amount of pitch change.
The actual amount of pitch change will depend on the “Pitch EG” (3.1–1b, 3.1–3) parameter “Intensity.” For example with an “Intensity” setting of **+12.00**, a “Level” setting of **+99** would raise the pitch one octave, and a “Level” setting of **–99** would lower the pitch one octave.

S (Start Level) **[–99…+99]**

Specifies the amount of pitch change at note-on.

A (Attack Level) **[–99…+99]**

Specifies the amount of pitch change when the attack time has elapsed.

R (Release Level) **[–99…+99]**

Specifies the amount of pitch change when the release time has elapsed.

T (Time):

These parameters specify the length of time over which the pitch change will occur.

A (Attack Time) **[0…99]**

Specifies the time over which the pitch will change from note-on until it reaches the pitch specified as the attack level.

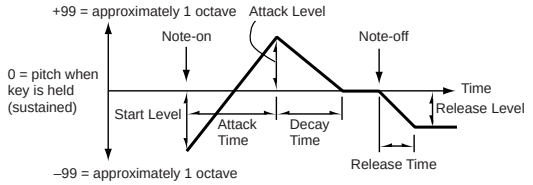
D (Decay Time) **[0…99]**

Specifies the time over which the pitch will change after reaching the attack level until it reaches the normal pitch.

R (Release Time) **[0…99]**

Specifies the time over which the pitch will change from note-off until it reaches the pitch specified as the release level.

Time-varying pitch settings (when Pitch EG Intensity = +12.00)



3.1–5b: Level Mod. (Level Modulation)

These settings allow the pitch EG “L (Level)” parameters to be controlled by alternate modulation.

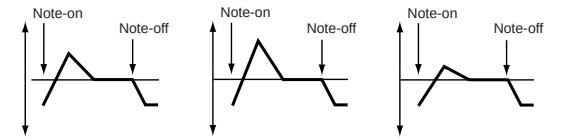
AMS1 (Level Mod. AMS1) **[Off, (KT, EXT)]**

Selects the source that will control the pitch EG “L (Level)” parameters (☞p.212 “AMS List”).

I (AMS1 Intensity) **[–99…+99]**

Specifies the depth and direction of the effect applied by “AMS1 (Level Mod. AMS1).”
With a setting of **0**, the levels specified by “Pitch EG” (3.1–5a) will be used.
For example, if “AMS1 (Level Mod. AMS1)” is **SW1 #80**, pressing the [SW1] key to turn it on will change the “Level” parameters of the Pitch EG. (“SW1/2 Assign”: 2.2–1b) to **SW1 Mod. (CC#80)**. As the absolute value of “I (AMS1 Intensity)” is increased, the pitch EG levels will change more greatly when the [SW1] key is turned on. The direction of the change is specified by “S (AMS1 SW Start)” and “A (AMS1 SW Attack).” When the [SW1] key is turned off, the pitch EG levels will return to their own settings.
If “AMS1” is set to **Velocity**, increasing the absolute value of “Intensity” will produce increasingly wider change in pitch EG levels for strongly-played notes. The direction of the change is specified by “S (AMS1 SW Start)” and “A (AMS1 SW Attack).” As you play more softly, the pitch change will draw closer to the pitch EG levels.

Pitch EG change (level) (AMS=SW1/Velocity, Intensity= positive (+) value)



A note played softly with “S” set at 0, “A” set to +, and SW1 turned on (the settings of 3.1–5a: Pitch EG)

A note played strongly with “S” set to 0, “A” set to +, and SW1 turned on

A note played strongly with “S” set to 0, “A” set to –, and SW1 turned on

S (AMS1 SW Start) **[–, 0, +]**

Specifies the direction of change in “S (Start Level)” caused by “AMS1 (Level Mod. AMS1).” If “I (AMS1 Intensity)” is a **positive (+)** value, a setting of + will raise the EG level, and a setting of – will decrease it. With a setting of **0** there will be no change.

A (AMS1 SW Attack) **[–, 0, +]**

Specifies the direction of change in “A (Attack Level)” caused by “AMS1 (Level Mod. AMS1).” If “I (AMS1 Intensity)” is a **positive (+)** value, a setting of + will raise the EG level, and a setting of – will decrease it. With a setting of **0** there will be no change.

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AMS2 (Level Mod. AMS2) **[Off, (KT, EXT)]**
I (AMS2 Intensity) **[–99…+99]**
S (AMS2 SW Start) **[–, 0, +]**
A (AMS2 SW Attack) **[–, 0, +]**

Refer to the preceding paragraphs "AMS1 (Level Mod. AMS1)"–"A (AMS1 SW Attack)."

3.1–5c: Time Mod. (Time Modulation)

These parameters let you use alternate modulation to control the "T (Time)" parameters of the pitch EG.

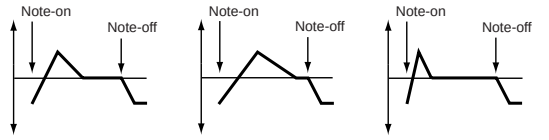
AMS (Time Mod. AMS) **[Off, (KT, EXT)]**

Indicates the source that will control the "T (Time)" parameters of the pitch EG (☞p.212 "AMS List").

I (AMS Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS (Time Mod. AMS)" will have.
With a setting of **0**, the pitch EG times will be just as specified by the "Pitch EG" (3.1–5a) settings.
The alternate modulation value at the moment that the EG reaches each point will determine the actual value of the EG time that comes next.
For example, the decay time will be determined by the alternate modulation value at the moment that the attack level is reached.
When this parameter is set to values of **16**, **33**, **49**, **66**, **82**, or **99**, the specified EG times will speed up as much as 2, 4, 8, 16, 32, or 64 times respectively (or slowed down to 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64 of the original time).
For example if "AMS (Time Mod. AMS)" is set to **Velocity**, increasing the absolute value of "I (AMS Intensity)" will allow strongly-played notes to increase the changes in pitch EG "T (Time)" values. The direction of the change is specified by "A (AMS SW Attack)" and "D (AMS SW Decay)." As you play more softly, the pitch EG times will more closely approach the actual settings of the pitch EG.

Pitch EG changes (Time) (AMS = Velocity, Intensity = positive (+) value)



A note played softly with "A" set to + and "D" set to + (settings of 3.1–5a: Pitch EG) | A note played strongly with "A" set to + and "D" set to + | A note played strongly with "A" set to – and "D" set to –

A (AMS SW Attack) **[–, 0, +]**

Specifies the direction in which "AMS (Time Mod. AMS)" will affect the "A (Attack Time)." With **positive (+)** values of "I (AMS Intensity)," a setting of **+** will cause the time to be lengthened, and a setting of **–** will cause the time to be shortened. With a setting of **0** there will be no change.

D (AMS SW Decay) **[–, 0, +]**

Specifies the direction in which "AMS (Time Mod. AMS)" will affect the "D (Decay Time)." With **positive (+)** values of "I (AMS Intensity)," a setting of **+** will cause the time to be lengthened, and a setting of **–** will cause the time to be shortened. With a setting of **0** there will be no change.

■ 3.1–5d: UTILITY

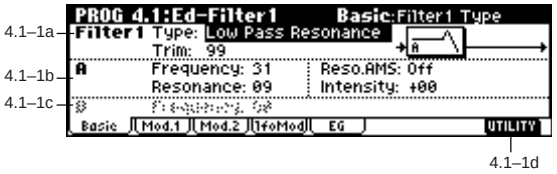
☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

PROG 4.1: Ed–Filter1

Indicates settings for filter 1, which controls the tone of oscillator 1. You can select either a 24 dB/oct low pass filter with resonance, or a 12 dB/oct low pass filter and 12 dB/oct high pass filter connected in series.
When "Mode (Oscillator Mode)" (2.1–1a) is **Single**, **Drums** you can use filter 1. When it is **Double**, you can use filters 1 and 2. In the case of **Single** and **Drums**, the filter 2 pages cannot be selected.

4.1–1: Basic

Here you can specify the basic filter type used by oscillator 1, and set the cutoff frequency and resonance.



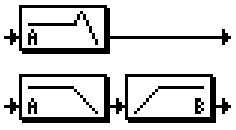
4.1–1a: Filter1

Type (Filter1 Type) **[Low Pass Resonance, Low Pass & High Pass]**

Indicates the type of filter 1.

Low Pass Resonance: 24 dB/octave low pass filter with resonance

Low Pass & High Pass: 12 dB/octave low pass filter and 12 dB/octave high pass filter in series



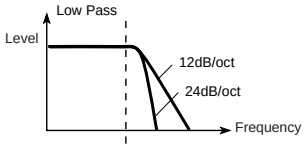
Trim **[00…99]**

Adjusts the level at which the audio signal output from OSC1 is input to filter 1A.

If the trim value is set too high, the sound may be distorted if the Resonance is set to a high value or when you play a chord.

4.1–1b: A (Filter A)

This filter cuts the high-frequency range above the cutoff frequency. This is the most common type of filter, which cuts the overtone structure to make a bright (sharp) tone darker (mellow).
When "Type (Filter1 Type)" is **Low Pass Resonance**, the cut will have a steeper curve.



Frequency (A Frequency) **[00…99]**

Specifies the cutoff frequency of filter 1A.

Resonance (A Resonance) **[00…99]**

This emphasizes the overtone components that lie in the region of the cutoff frequency specified by "Frequency (A Frequency)," producing a more distinctive sound. Increasing this value will produce a stronger effect.

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Reso.AMS (Resonance AMS)

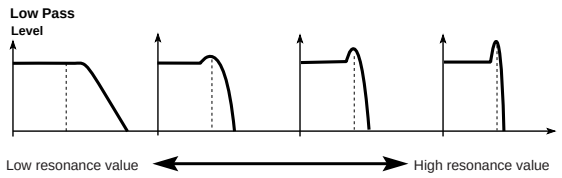
[Off, (PEG, FEG, AEG, LFO, KT, EXT)]

Indicates the source that will control the “Resonance (A Resonance)” level (☞p.212 “AMS List”).

Intensity (AMS Intensity) [–99…+99]

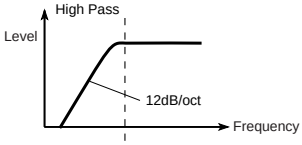
Specifies the depth and direction of the effect that “Reso. AMS (Resonance AMS)” will have on the resonance level specified by “Resonance (A Resonance).”
For example, if **Velocity** has been selected, changes in keyboard velocity will affect the resonance.
With **positive (+) values**, the resonance will increase as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance (A Resonance)” setting.
With **negative (–) values**, the resonance will decrease as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance (A Resonance)” setting.
The resonance level is determined by adding the “Resonance (A Resonance)” and “Intensity (AMS Intensity)” values together.

The effect of resonance



4.1–1c: B (Filter B)

This will be displayed if “Type (Filter1 Type)” (4.1–1a) is **Low Pass & High Pass**.
This filter cuts the low-frequency range that lies below the cutoff frequency.
By cutting the lower overtones, it lightens the tone.



Frequency (B Frequency) [00…99]

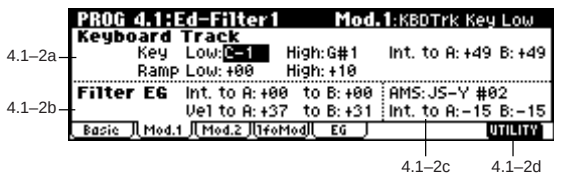
Specifies the cutoff frequency of filter 1B.

■ 4.1–1d: UTILITY

☞“Write Program” (1.1–1c), “Copy Oscillator,” “Swap Oscillator” (2.1–1d)

4.1–2: Mod.1 (Filter1 Modulation1)

Indicates settings for keyboard tracking which modifies the tone by modulating the filter 1 cutoff frequency “Frequency (A / B Frequency),” and intensity settings for the filter 1 EG, etc.



4.1–2a: Keyboard Track AMSource

These settings specify keyboard tracking for the cutoff frequency of filter 1. The way in which the cutoff frequency is affected by the position of the key (on the keyboard) that you play can be specified by the Key: “Low” and “High,” Ramp: “Low” and “High” parameters.

Key:

Specifies the note numbers at which keyboard tracking will begin to be applied, and set the “Int. to A” and “(Int. to) B” parameters to specify the depth and direction of the change applied to filter 1 A and B.
For the range of notes between “Low (KBDTrk Key Low)” and “High (KBDTrk Key High),” the cutoff frequency will change according to the key location (pitch).

note You can also input a value by playing a note on the keyboard while you hold down the [ENTER] key.

Low (KBDTrk Key Low) [C–1…G9]

Keyboard tracking will apply to the range below the specified note number.

High (KBDTrk Key High) [C–1…G9]

Keyboard tracking will apply to the range above the specified note number.

Ramp (Ramp Setting):

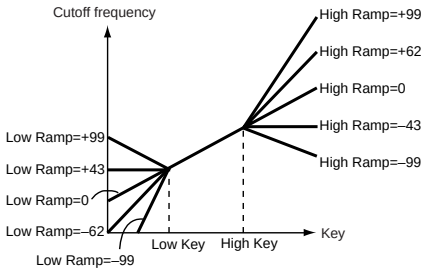
Specifies the angle of keyboard tracking.

Low (KBDTrk Ramp Low) [–99…+99]

High (KBDTrk Ramp High) [–99…+99]

If “Int. to A (KBDTrk Int. to A)” and “Int. to B (KBDTrk Int. to B)” are set to **+50**, “Low (KBDTrk Ramp Low)” is set to **–62** and “High (KBDTrk Ramp High)” is set to **+62**, the angle of the change in cutoff frequency will correspond to the key location (pitch). This means that the oscillation that occurs when you increase the “Resonance (A Resonance)” (4.1–1b) will correspond to the keyboard location.
If you set “Low (KBDTrk Ramp Low)” to **+43** and “High (KBDTrk Ramp High)” to **–43**, the cutoff frequency will not be affected by keyboard location. Use this setting when you do not want the cutoff frequency to change for each note.

How cutoff frequency is affected by keyboard location and the Ramp setting
(“Int. to A,” “Int. to B”=+50)



Int. to A (KBDTrk Int. to A) [–99…+99]

Specifies the depth and direction of the effect on filter 1A produced by keyboard tracking settings “Low (KBDTrk Key Low),” “High (KBDTrk Key High),” “Low (KBDTrk Ramp Low),” and “High (KBDTrk Ramp High).”
With **positive (+)** settings, the effect will be in the same direction as the keyboard tracking settings.
With **negative (–)** settings, the effect will be in the opposite direction.

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Int. to B (KBDTrk Int. to B) **[–99…+99]**

Specifies the depth and direction of the effect on filter 1B produced by keyboard tracking. (☞"Int. to A (KBDTrk Int. to A)")

4.1–2b: Filter EG

Int. to A (Intensity to A) **[–99…+99]**

Specifies the depth and direction of the effect that the time-varying changes created by the filter 1 EG will have on the filter 1A cutoff frequency.
With **positive (+)** settings, the sound will become brighter when the EG levels set by Filter 1 EG "L (Level)" and "T (Time)" parameters (4.1–5a) are in the "+" area, and darker when they are in the "–" area.
With **negative (–)** settings, the sound will become darker when the EG levels set by Filter 1 EG "L (Level)" and "T (Time)" parameters are in the "+" area, and brighter when they are in the "–" area.

Int. to B (Intensity to B) **[–99…+99]**

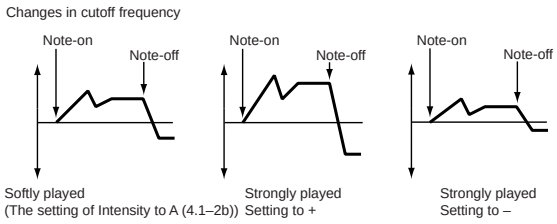
Specifies the depth and direction of the effect that the time-varying changes created by the filter 1 EG will have on the filter 1B cutoff frequency. (☞"Int. to A (Intensity to A)")

Vel to A (Velocity to A) **[–99…+99]**

This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter 1 EG (as set by "Filter 1 EG" 4.1–5) to control the filter 1A cutoff frequency.
With **positive (+) values**, playing more strongly will cause the filter 1 EG to produce greater changes in cutoff frequency. With **negative (–) values**, playing more strongly will also cause the filter 1 EG to produce greater changes in cutoff frequency, but with the polarity of the EG inverted.

Vel to B (Velocity to B) **[–99…+99]**

This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter 1 EG to control the filter 1B cutoff frequency. (☞"Vel to A (Velocity to A)")



■ 4.1–2c: AMS, Into to A, Int to B

AMS (Filter EG AMS) **[Off, (EXT)]**

Indicates the source that will control the depth and direction of the effect that the time-varying changes produced by the filter 1 EG will have on the cutoff frequency of filters 1A and 1B (☞p.212 "AMS List").

Int. to A (AMS Int. to A) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS (Filter EG AMS)" will have on filter 1A.
For details on how this will apply, refer to "Int. to A (Intensity to A)."

Int. to B (AMS Int. to B) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS (Filter EG AMS)" will have on filter 1B. (☞"Int. to A (Intensity to A).")

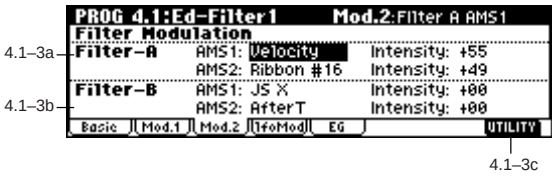
MIDI The sum of the settings for "Int. to A (B)," "Vel to A (B)," and "Int. to A (B) (AMS Int. to A / B)" will determine the depth and direction of the effect produced by the filter EG.

■ 4.1–2d: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

4.1–3: Mod.2 (Filter1 Modulation2)

Indicates settings for the controller that will modify the tone by applying modulation to the filter 1 cutoff frequency "Frequency (A / B Frequency)."
If "Type (Filter Type)" (4.1–1a) is **Low Pass Resonance**, the filter B parameters will not be displayed.



4.1–3a: Filter-A Modulation

AMS1 (Filter A AMS1) **[Off, (PEG, AEG, EXT)]**

Indicates the source that will control modulation of the filter 1A cutoff frequency (☞p.212 "AMS List").

Intensity (A AMS1 Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS1 (Filter A AMS1)" will have.
When "AMS1 (Filter A AMS1)" is **JS X**, a **positive (+) value** for this parameter will cause the cutoff frequency to rise when the joystick is moved toward the right, and fall when the joystick is moved toward the left. With a **negative (–) value** for this parameter, the opposite will occur.
This value is added to the setting of the Filter A "Frequency (A Frequency)"(4.1–1b).

AMS2 (Filter A AMS2) **[Off, (PEG, AEG, EXT)]**

Intensity (A AMS2 Intensity) **[–99…+99]**

Selects "AMS2 (Filter A AMS2)," and specify the depth and direction of the effect that the selected source will have (☞"AMS1," "Intensity").

■ 4.1–3b: Filter-B Modulation

This will be displayed when "Type (Filter Type)" (4.1–1a) is **Low Pass & High Pass**.
Two alternate modulation sources can be used to modulate the cutoff frequency of filter 1B (☞"Filter-A Modulation").

■ 4.1–3c: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

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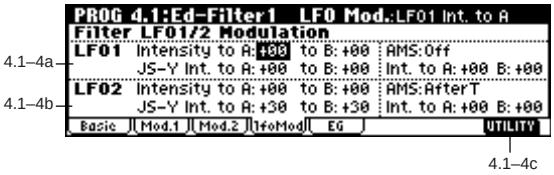
4.1–4: lfoMod (LFO Modulation)

Here you can use the filter 1 LFO to apply cyclic modulation to the cutoff frequency of filter 1 (for oscillator 1) to create cyclical changes in tone.



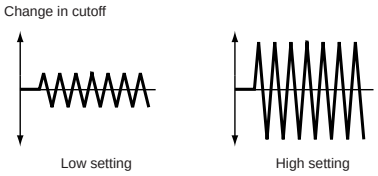
4.1–4a: Filter LFO1 Modulation

Intensity to A (LFO1 Int. to A) [–99…+99]

Specifies the depth and direction of the modulation that OSC1 LFO1 (set by "OSC1 LFO1" 5.3–1a) will have on the cutoff frequency of filter 1A.
Negative (–) settings will invert the phase.

Intensity to B (LFO1 Int. to B) [–99…+99]

Specifies the depth and direction of the modulation that OSC1 LFO1 will have on the cutoff frequency of filter 1B (☞"Intensity to A (LFO1 Int. to A)").



JS–Y Int. to A (LFO1 JS–Y Int. to A) [–99…+99]

By moving the joystick in the –Y direction (toward yourself), you can control the depth at which OSC1 LFO1 modulates the cutoff frequency of filter 1A. This parameter specifies the depth and direction of the control.

For example, as this **value is raised**, OSC1 LFO1 will have a correspondingly greater effect on filter 1 when the joystick is moved in the –Y direction.

JS–Y Int. to B (LFO1 JS–Y Int. to B) [–99…+99]

By moving the joystick in the –Y direction (toward yourself), you can control the depth at which OSC1 LFO1 modulates the cutoff frequency of filter 1B. This parameter specifies the depth and direction of the control. (☞"JS –Y Int. to A (LFO1 JS–Y Int. to A)")

AMS (LFO1 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]

Selects a source that will control the depth and direction of cutoff frequency change for both filters 1A and 1B (☞p.212 "AMS List").

Int. to A (LFO1 AMS Int. to A) [–99…+99]

Specifies the depth and direction of the effect that "AMS (LFO1 AMS)" will have on filter 1A.
For example, if "AMS" is **AfterT**, **higher** settings of this parameter will allow greater change to be applied to OSC1 LFO1 when you apply pressure to the keyboard.

Int. to B (LFO1 AMS Int. to B) [–99…+99]

Specifies the depth and direction of the effect that "AMS (LFO1 AMS)" will have on filter 1B (☞"Int. to A (LFO1 AMS Int. to A)").

4.1–4b: Filter LFO2 Modulation

Adjusts the depth of the cyclic modulation applied by OSC1 LFO2 (set by "OSC1 LFO 2" 5.3–2) to the cutoff frequency of filters 1A and 1B (☞"Filter LFO 1 Modulation" 4.1–4a).

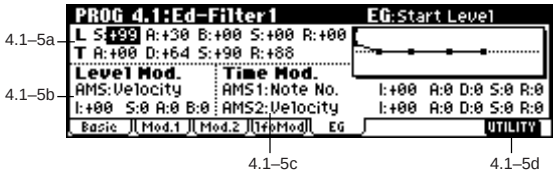
Intensity to A (LFO2 Int. to A) [–99…+99]
Intensity to B (LFO2 Int. to B) [–99…+99]
JS–Y Int. to A (LFO2 JS–Y Int. to A) [–99…+99]
JS–Y Int. to B (LFO2 JS–Y Int. to B) [–99…+99]
AMS (LFO2 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]
Int. to A (LFO2 AMS Int. to A) [–99…+99]
Int. to B (LFO2 AMS Int. to B) [–99…+99]

■ 4.1–4c: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

4.1–5: EG (Filter1 EG) AMSource

Here you can make settings for the EG that will produce time-varying changes in the cutoff frequency of filters 1A and 1B.
The depth of the effect that these settings will have on the filter 1 cutoff frequency is determined by "Filter EG" (4.1–2b).



4.1–5a: Filter1 EG

Specifies the time-varying change produced by the filter 1 EG.

L (Level):

The result will depend on the filter that was selected in "Type (Filter Type)" (4.1–1a). For example with the **Low Pass Resonance** filter, **positive (+)** values of "Int. to A" (4.1–2b) will cause the tone to be brightened by **positive (+) levels**, and darkened by **negative (–) levels**.

S (Start Level) [–99…+99]

Specifies the change in cutoff frequency at the time of note-on.

A (Attack Level) [–99…+99]

Specifies the change in cutoff frequency after the attack time has elapsed.

B (Break Point Level) [–99…+99]

Specifies the change in cutoff frequency after the decay time has elapsed.

S (Sustain Level) [–99…+99]

Specifies the change in cutoff frequency that will be maintained from after the slope time has elapsed until note-off occurs.

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R (Release Level) **[–99…+99]**

Specifies the change in cutoff frequency that will occur when the release time has elapsed.

T (Time):

These parameters specify the time over which each change will occur.

A (Attack Time) **[00…99]**

Specifies the time over which the level will change from note-on until the attack level is reached.

D (Decay Time) **[00…99]**

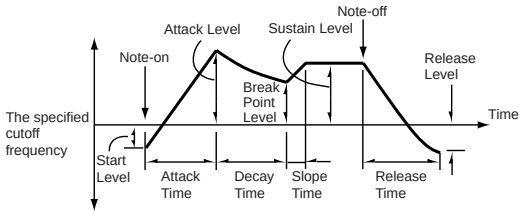
Specifies the time over which the level will change from the attack level to the break point level.

S (Slope Time) **[00…99]**

Specifies the time over which the level will change after the decay time has elapsed until the sustain level is reached.

R (Release Time) **[00…99]**

Specifies the time over which the level will change after note-on occurs until the release level is reached.



4.1–5b: Level Mod. (Level Modulation)

These settings let you use alternate modulation to control the "L (Level)" parameters of the filter 1 EG.

AMS (Level Mod. AMS) **[Off, (KT, EXT)]**

Indicates the source that will control the "L (Level)" parameters of the filter 1 EG (☞p.212 "AMS List").

I (AMS Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS (Level Mod. AMS)" will have.
For example, if "AMS (Level Mod. AMS)" is **Velocity**, and you set "S (AMS SW Start)," "A (AMS SW Attack)" and "B (AMS SW Break)" to + and set "I (AMS Intensity)" to a **positive (+) value**, the EG levels will rise as you play more strongly. If "Intensity" is set to a **negative (–) values**, the EG levels will fall as you play more strongly.
With a setting of **0**, the levels specified by "Filter 1 EG" (4.1–5a) will be used, no additional effect is produced.

S (AMS SW Start) **[–, 0, +]**

Specifies the direction in which "AMS (Level Mod. AMS)" will affect "S (Start Level)." When "I (AMS Intensity)" has a **positive (+)** value, a setting of **+** for this parameter will allow "AMS" to raise the EG level, and a setting of **–** will allow "AMS" to lower the EG level. With a setting of **0** there will be no change.

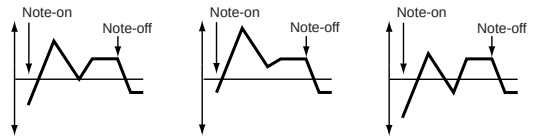
A (AMS SW Attack) **[–, 0, +]**

Specifies the direction in which "AMS (Level Mod. AMS)" will affect "A(Attack Level)." When "I (AMS Intensity)" has a **positive (+)** value, a setting of **+** for this parameter will allow "AMS" to raise the EG level, and a setting of **–** will allow "AMS" to lower the EG level. With a setting of **0** there will be no change.

B (AMS SW Break) **[–, 0, +]**

Specifies the direction in which "AMS (Level Mod. AMS)" will affect "B (Break Point Level)." When "I (AMS Intensity)" has a **positive (+)** value, a setting of **+** for this parameter will allow "AMS" to raise the EG level, and a setting of **–** will allow "AMS" to lower the EG level. With a setting of **0** there will be no change.

Filter 1 EG changes (level) (AMS = Velocity, Intensity = a positive (+) value)



Softly played note with "S," "A," and "B" set to + (setting of 4.1–5a: Filter 1 EG)

Strongly played note with "S," "A," and "B" set to +

Strongly played note with "S," "A," and "B" set to –

4.1–5c: Time Mod. (Time Modulation)

These settings let you use alternate modulation to control the "T (Time)" parameters of the filter 1 EG.

AMS1 (Time Mod. AMS1) **[Off, (KT, EXT)]**

Indicates the source that will control the "T (Time)" parameters of the filter 1 EG (☞p.212 "AMS List").

I (AMS1 Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS1 (Time Mod. AMS1)" will have.
For example, if "AMS1 (Time Mod. AMS1)" is set to **Flt KTr +/+**, the EG "T (Time)" parameters will be controlled by the Keyboard Track (4.1–2a) settings. With **positive (+) values** of this parameter, **positive (+) values** of "Ramp (Ramp Setting)" (4.1–2a) will lengthen the EG times, and **negative (–) values** of "Ramp (Ramp Setting)" will shorten the EG times. The direction of change is specified by "A (AMS1 SW Attack)," "D (AMS1 SW Decay)," "S (AMS1 SW Slope)," and "R (AMS1 SW Release)."
With a setting of **0**, the times specified by "Filter1 EG" (4.1–5a) will be used.
If "AMS1 (Time Mod. AMS1)" is set to **Velocity**, **positive (+) values** of this parameter will cause EG times to lengthen as you play more strongly, and **negative (–) values** will cause EG times to shorten as you play more strongly.
With a setting of **0**, the times specified by "Filter1 EG" will be used.

A (AMS1 SW Attack) **[–, 0, +]**

Specifies the direction in which "AMS1 (Time Mod. AMS1)" will affect the attack time. With **positive (+)** values of "I (AMS1 Intensity)," setting this parameter to **+** will allow AMS1 to lengthen the time, and setting this parameter to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

D (AMS1 SW Decay) **[–, 0, +]**

Specifies the direction in which "AMS1 (Time Mod. AMS1)" will affect the decay time. With **positive (+)** values of "I (AMS1 Intensity)," setting this parameter to **+** will allow AMS1 to lengthen the time, and setting this parameter to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

S (AMS1 SW Slope) **[–, 0, +]**

Specifies the direction in which "AMS1 (Time Mod. AMS1)" will affect the slope time. With **positive (+)** values of "I (AMS1 Intensity)," setting this parameter to **+** will allow AMS1 to lengthen the time, and setting this parameter to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

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R (AMS1 SW Release) **[–, 0, +]**

Specifies the direction in which "AMS1 (Time Mod. AMS1)" will affect the release time. With **positive (+)** values of "I (AMS1 Intensity)," setting this parameter to **+** will allow AMS1 to lengthen the time, and setting this parameter to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

Filter 1 EG changes (Time) (AMS = Velocity, Intensity = a positive (+) value)

Softly played note with "A," "D," "S" and "R" set to + (setting of 4.1–5a: Filter 1 EG)

Strongly played note with "A," "D," "S" and "R" set to +

Strongly played note with "A," "D," "S" and "R" set to –

AMS2 (Time Mod. AMS2) **[Off, (KT, EXT)]**
I (AMS2 Intensity) **[–99…+99]**
A (AMS2 SW Attack) **[–, 0, +]**
D (AMS2 SW Decay) **[–, 0, +]**
S (AMS2 SW Slope) **[–, 0, +]**
R (AMS2 SW Release) **[–, 0, +]**

These parameters are the settings for "AMS2" to control the "Time" parameters of the filter 1 EG (☞"AMS1 (Time Moc. AMS1)"–"R (AMS1 SW Release)").

■ 4.1–5d: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Sync Both EGs

If you select "Sync Both EGs" from the Utility menu and press the [F8] key, a check mark will appear at the left of "Sync Both EGs." In this state, the filter 1 EG and the filter 2 EG can be edited simultaneously. (Editing either one will cause the other to change.)

note "Sync Both EGs" cannot sync the filter EG and amp EG independently. For example if you sync in 5.1–3d, it will be synced here as well.

note This can be selected only if "Mode (Oscillator Mode)" (2.1–1a) is **Double**.

PROG 4.2: Ed–Filter2

4.2–1: Basic

4.2–2: Mod.1 (Filter2 Modulation1)

4.2–3: Mod.2 (Filter2 Modulation2)

4.2–4: lfoMod (LFO Modulation)

4.2–5: EG (Filter2 EG) AMSource

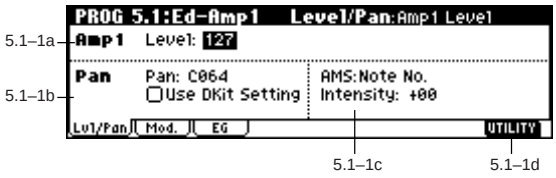
Indicates settings for filter 2, which controls the tone of oscillator 2. You can select either a 24 dB / oct low pass filter with resonance, or a 12 dB / oct low pass filter and 12 dB / oct high pass filter connected in series. Filter 2 can be used when "Mode (Oscillator Mode)" (2.1–1a) is **Double**. (☞"PROG 4.1: Ed-Filter 1")

PROG 5.1: Ed–Amp1

Indicates settings for amp 1 which controls the volume of oscillator 1. Pan settings are also made here.

5.1–1: Lvl / Pan (Level / Pan)

These parameters control the volume and pan of oscillator 1.



5.1–1a: Amp1 Level

Level (Amp1 Level) **[0…127]**

Sets the volume of oscillator 1.

MIDI The volume of a program can be controlled by CC#7 (volume) and CC#11 (expression). The resulting level is determined by summing the values of CC#7 and CC#11. The Global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a) is used for control.

5.1–1b: Pan

Pan (Amp1 Pan) **[Random, L001…C064…R127]**

Sets the pan (stereo location) of oscillator 1.
A setting of **L001** places the sound at far left, **C064** in the center, and **R127** to far right.

Random: The sound will be heard from a different location at each note-on.

MIDI This can be controlled by CC#10 (panpot). A CC#10 value of **0** or **1** will place the sound at the far left, a value of **64** will place the sound at the location specified by the "Pan" setting for each oscillator, and a value of **127** will place the sound at the far right. This is controlled on the global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a).

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Use DKit Setting [Off, On]

This is valid when “Mode (Oscillator Mode)” (2.1–1a) is set to **Drums**.

On (checked): The sound will be output at the “Pan” setting that has been made for each key of the drum kit (GLOBAL 5.1–3a). When “Mode (Oscillator Mode)” is **Drums**, you will normally use this setting.
Off (unchecked): All notes will be output as specified by the “Pan (Amp1 Pan)” setting.

5.1–1c: AMS, Intensity

AMS (Pan AMS) [Off, (PEG, FEG, AEG, LFO, KT, EXT)]

Indicates the source that will modify pan (☞p.212 “AMS List”). This change will be relative to the “Pan (Amp1 Pan)” setting.

Intensity [–99…+99]

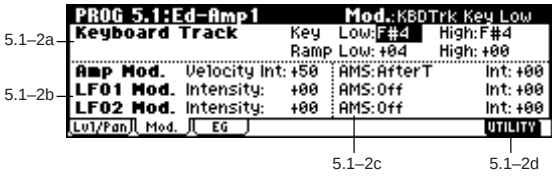
Specifies the depth of the effect produced by “AMS (Pan AMS).”
For example, if “Pan (Amp1 Pan)” is set to **C064** and “AMS (Pan AMS)” is **Note Number**, **positive (+) values** of this parameter will cause the sound to move toward the right as the note numbers increase beyond the C4 note (i.e., as you play higher), and toward the left as the note numbers decrease (i.e., as you play lower). **Negative (–) values** of this parameter will have the opposite effect.

■ 5.1–1d: UTILITY

☞“Write Program” (1.1–1c), “Copy Oscillator,” “Swap Oscillator” (2.1–1d)

5.1–2: Mod. (Amp1 Modulation)

These settings allow you to apply modulation to amp 1 (for oscillator 1) to modulate the volume.



5.1–2a: Keyboard Track

These parameters let you use keyboard tracking to adjust the volume of oscillator 1. Use the “Key” and “Ramp” parameters to specify how the volume will be affected by the position on the keyboard of the note that you play.

Key (Keyboard Track Key):

Specifies the note number at which keyboard tracking will begin to apply.
The volume will not change between “Low (KBDTrk Key Low)” and “High (KBDTrk Key High).”

note You can also input a value by playing a note on the keyboard while you hold down the [ENTER] key.

Low (KBDTrk Key Low) [C–1…G9]

Keyboard tracking will apply to the range of notes below the note number you specify here.

High (KBDTrk Key High) [C–1…G9]

Keyboard tracking will apply to the range of notes above the note number you specify here.

Ramp (Ramp Setting):

Specifies the angle of the keyboard tracking.

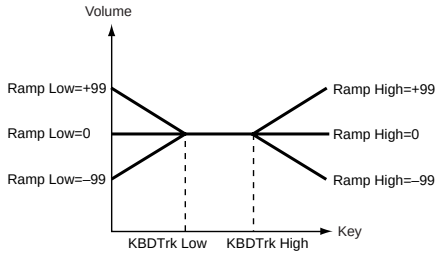
Low (KBDTrk Ramp Low) [–99…+99]

With **positive (+) values** of this parameter, the volume will increase as you play notes below the “Low (KBDTrk Key Low)” note number. With **negative (–) values**, the volume will decrease.

High (KBDTrk Ramp High) [–99…+99]

With **positive (+) values** of this parameter, the volume will increase as you play notes above the “High (KBDTrk Key High)” note number. With **negative (–) values**, the volume will decrease.

Volume change produced by key position and Ramp settings



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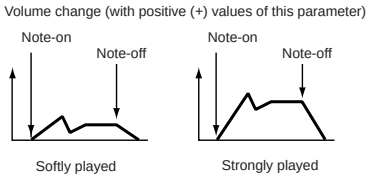
5.1–2b: Amp Mod., LFO1 Mod., LFO2 Mod.

Indicates settings to specify how the volume of oscillator 1 will be controlled by velocity, OSC1 LFO1, and OSC1 LFO2.

Amp Mod. (Amp Modulation):

Velocity Int. (Amp Velocity Int.) **[–99…+99]**

With **positive (+) values**, the volume will increase as you play more strongly.
With **negative (–) values**, the volume will decrease as you play more strongly.



LFO1 Mod. (LFO1 Modulation):

Intensity (LFO1 Intensity) **[–99…+99]**

These parameters let you use "OSC1 LFO1" (5.3–1) to control the oscillator 1 volume.
Negative (–) values will invert the LFO waveform.

LFO2 Mod. (LFO2 Modulation):

Intensity (LFO2 Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "OSC1 LFO2"(5.3–2) will have on the volume of oscillator 1. Refer to the preceding sections "LFO1 Mod. (LFO1 Modulation)."

5.1–2c: AMS, Int.

AMS (Amp AMS) **[Off, (PEG, FEG, EXT)]**

Indicates the source that will control the volume of amp 1 (☞p.212 "AMS List") (EXT) **Velocity** cannot be selected.

Int. (AMS Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS (Amp AMS)" will have.
The actual volume will be determined by summing the value of the changes produced by the amp EG with the values of Alternate Modulation etc., and if the levels of the amp EG are low, the modulation applied by Alternate Modulation will also be less.
For example, if you set "AMS (Amp AMS)" to **AfterT** and press down on the keyboard, the volume will increase if you have set this parameter to a **positive (+) value**. However if the volume is already at maximum due to the EG settings etc., it will not be possible to increase the volume any further. If you have set this parameter to a **negative (–) value**, pressing down on the keyboard will decrease the volume.

AMS (LFO1 AMS) **[Off, (PEG, FEG, AEG, KT, EXT)]**

Indicates the source that will control the depth by which "OSC1 LFO1" (5.3-1) will modulate the volume of oscillator 1 (☞p.212 "AMS List").

Int. (AMS Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "OSC1 LFO1" will have on the volume of oscillator 1. **Negative (–) values** will invert the LFO waveform.

AMS (LFO2 AMS) **[Off, (PEG, FEG, AEG, KT, EXT)]**

Indicates the source that will control the depth by which "OSC1 LFO2" (5.3-2) will modulate the volume of oscillator 1 (☞p.212 "AMS List").

Int. (AMS Intensity) **[–99…+99]**

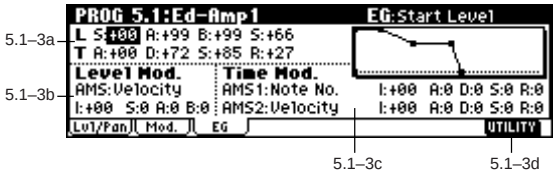
Specifies the depth and direction of the effect that "OSC1 LFO2" will have on the volume of oscillator 1. **Negative (–) values** will invert the LFO waveform.

■ 5.1–2d: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

5.1–3: EG (Amp1 EG) AMSource

Indicates settings to specify how Amp 1 will cause the volume of oscillator 1 to change over time.



5.1–3a: Amp1 EG

These parameters specify how the amp 1 EG will change over time.

L (Level):

S (Start Level) **[00…99]**

Specifies the volume level at note-on.
If you want the note to begin at a loud level, set this to a high value.

A (Attack Level) **[00…99]**

Specifies the volume level that will be reached after the attack time has elapsed.

B (Break Point Level) **[00…99]**

Specifies the volume level that will be reached after the decay time has elapsed.

S (Sustain Level) **[00…99]**

Specifies the volume level that will be maintained from after the slope time has elapsed until note-off occurs.

Time:

A (Attack Time) **[00…99]**

Specifies the time over which the volume will change after note-on until it reaches the attack level.
If the start level is **0**, this will be the rise time of the sound.

D (Decay Time) **[00…99]**

Specifies the time over which the volume will change from when it reaches the attack level until it reaches the break point level.

S (Slope Time) **[00…99]**

Specifies the time over which the volume will change from when it reaches the break point level until it reaches the sustain level.

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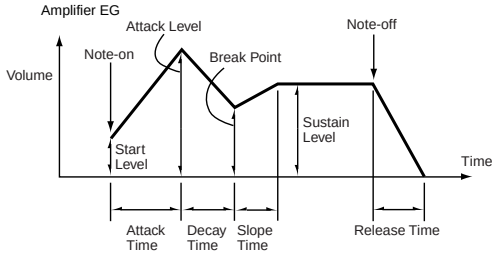
R (Release Time) [00…99]

Specifies the time over which the volume will change after note-off until it reaches 0.



5.1–3b: Level Mod. (Level Modulation)

These parameters let you use AMS to modulate the amp 1 EG levels that were specified in “Amp 1 EG” (5.1–3a).

AMS (Level Mod. AMS) [Off, (KT, EXT)]

Selects the source that will control the “Level” parameters of the amp 1 EG (☞p.212 “AMS List”).

I (AMS Intensity) [–99…+99]

Specifies the depth and direction of the effect that “AMS (Level Mod. AMS)” will have.
For example, if “AMS (Level Mod. AMS)” is **Velocity**, setting “S (AMS SW Start),” “A (AMS SW Attack),” and “B (AMS SW Break)” to + and setting “Intensity” to a **positive (+) value** will cause the amp 1 EG volume levels to increase as you play more strongly. Setting “Intensity” to a **negative (–) values** will cause the amp 1 EG volume levels to decrease as you play more strongly. With a setting of **0**, the levels will be as specified in “Amp 1 EG” (5.1–3a).

S (AMS SW Start) [–, 0, +]

Specifies the direction in which “AMS (Level Mod. AMS)” will change “S (Start Level).” If “I (AMS Intensity)” is set to a **positive (+) value**, setting this parameter to **+** will allow AMS to increase the EG level, and setting this parameter to **–** will allow AMS to decrease the EG level. With a setting of **0**, no change will occur.

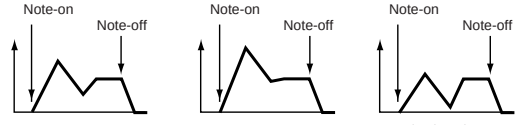
A (AMS SW Attack) [–, 0, +]

Specifies the direction in which “AMS (Level Mod. AMS)” will change “A (Attack Level).” If “I (AMS Intensity)” is set to a **positive (+) value**, setting this parameter to **+** will allow AMS to increase the EG level, and setting this parameter to **–** will allow AMS to decrease the EG level. With a setting of **0**, no change will occur.

B (AMS SW Break) [–, 0, +]

Specifies the direction in which “AMS (Level Mod. AMS)” will change “B (Break Point Level).” If “I (AMS Intensity)” is set to a **positive (+) value**, setting this parameter to **+** will allow AMS to increase the EG level, and setting this parameter to **–** will allow AMS to decrease the EG level. With a setting of **0**, no change will occur.

Amp 1 EG changes (Level) (AMS=Velocity, Intensity = a positive (+) value)



Softly played note when “S”=0 and “A” and “B” are set to + (settings of 5.1–3a: Amp 1 EG)

Strongly played note when “S”=0 and “A” and “B” are set to +

Strongly played note when “S”=0 and “A” and “B” are set to –

5.1–3c: Time Mod. (Time Modulation)

You can use two AMS sources to control the Amp 1 EG times that were specified in “Amp 1 EG” (5.1–3a).

AMS1 (Time Mod. AMS1) [Off, (EXT, KT)]

Selects the source that will control the “Time” parameters of Amp 1 EG. (☞p.212 “AMS List”)

I (AMS1 Intensity) [–99…+99]

Specifies the depth and direction of the effect that “AMS1 (Time Mod. AMS1)” will have.
For example, if “AMS1 (Time Mod. AMS1)” is **Amp KT +/+**, the (Amp) “Keyboard Track” settings (5.1–2a) will control the EG “Time” parameters. With **positive (+) values** of this parameter, **positive (+) values** of “Ramp (Ramp Setting)” will cause EG times to be lengthened, and **negative (–) values** of “Ramp (Ramp Setting)” will cause EG times to be shortened. The direction of the change is specified by “A (AMS1 SW Attack),” “D (AMS1 SW Decay),” “S (AMS1 SW Slope),” and “R (AMS1 SW Release).”
When “AMS1 (Time Mod. AMS1)” is **Velocity**, **positive (+) values** will cause EG times to lengthen as you play more strongly, and **negative (–) values** will cause EG times to shorten as you play more strongly. With a setting of **0**, the EG times will be as specified in “Amp1 EG” (5.1–3a).

A (AMS1 SW Attack) [–, 0, +]

Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “A (Attack Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to **+** will allow AMS1 to lengthen the time, and setting it to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

D (AMS1 SW Decay) [–, 0, +]

Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “D (Decay Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to **+** will allow AMS1 to lengthen the time, and setting it to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

S (AMS1 SW Slope) [–, 0, +]

Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “S (Slope Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to **+** will allow AMS1 to lengthen the time, and setting it to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

R (AMS1 SW Release) [–, 0, +]

Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “R (Release Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to **+** will allow AMS1 to lengthen the time, and setting it to **–** will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

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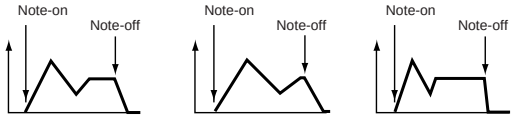
Amp 1 EG changes (Time)
(AMS=Amp KTrk +/+, Intensity = a positive (+) value)
(When Amp Keyboard Track (5.1–2a) Low Ramp= a positive (+) value, and High Ramp = a positive (+) value)

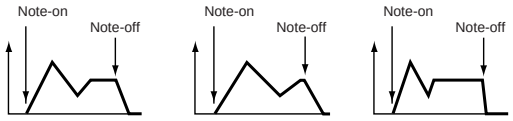


Settings of 5.1–3a: Amp 1 EG

Low-pitched note played with "A," "D," "S," and "R" at +

High-pitched note played with "A," "D," "S," and "R" at –

Amp 1 EG changes (Time) (AMS=Velocity, Intensity= a positive (+) value)



Softly played note with "A," "D," "S" and "R" at + (settings of 5.1–3a: Amp 1 EG)

Strongly played note with "A," "D," "S" and "R" at +

Strongly played note with "A," "D," "S" and "R" at –

AMS2 (Time Mod. AMS2) **[Off, (EXT, KT)]**
I (AMS2 Intensity) **[–99…+99]**
A (AMS2 SW Attack) **[–, 0, +]**
D (AMS2 SW Decay) **[–, 0, +]**
S (AMS2 SW Slope) **[–, 0, +]**
R (AMS2 SW Release) **[–, 0, +]**

These parameters specify how "AMS2 (Time Mod. AMS2)" will control the amp 1 EG "Time" parameters (☞"AMS1 (Time Mod. AMS1)"–"R(AMS1 SW Release)").

■ 5.1–3d: UTILITY

☞"Write Program" (1.1–1c), "Copy Oscillator," "Swap Oscillator" (2.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Sync Both EGs

If you select "Sync Both EGs" from the Utility menu and press the [F8] key, a check mark will appear at the left of "Sync Both EGs." In this state, the amp 1 EG and the amp 2 EG can be edited simultaneously. (Editing either one will cause the other to change.) (☞4.1–5d note)

PROG 5.2: Ed–Amp2

Indicates settings for amp 2 which controls the volume of oscillator 2. Pan settings are also made here.

5.2–1: Lvl/Pan (Level/Pan)

5.2–2: Mod. (Amp2 Modulation)

5.2–3: EG (Amp2 EG) AMSource

These will appear when "Mode (Oscillator Mode)" (2.1–1a) is **Double**. (☞"5.1: Ed–Amp1")

PROG 5.3: Ed–LFOs

Here you can make settings for the LFO that can be used to cyclically modulate the Pitch, Filter, and Amp of oscillators 1 and 2. There are two LFO units for each oscillator. By setting the LFO1 or LFO2 Intensity to a **negative (–) value** for Pitch, Filter, or Amp, you can invert the LFO waveform.

5.3–1: OS1LFO1 (OSC1 LFO1) AMSource

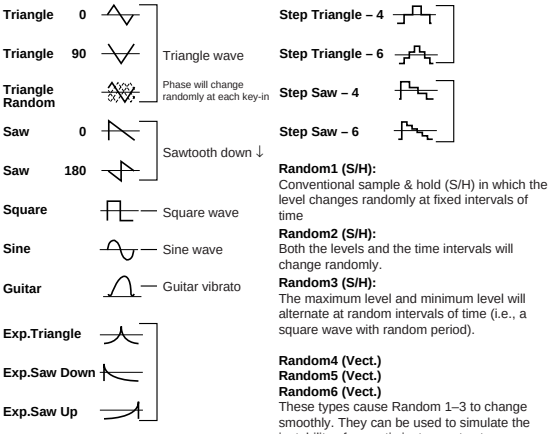
Indicates settings for the "OSC1 LFO1," which is the first LFO that can be used for oscillator 1.

5.3–1a: OSC1 LFO1

Waveform **[Triangle 0…Random6 (Vect.)]**

Selects the LFO waveform.

The numbers that appear at the right of some of the LFO waveforms indicate the phase at which the waveform will begin.



Random1 (S/H):
Conventional sample & hold (S/H) in which the level changes randomly at fixed intervals of time

Random2 (S/H):
Both the levels and the time intervals will change randomly.

Random3 (S/H):
The maximum level and minimum level will alternate at random intervals of time (i.e., a square wave with random period).

Random4 (Vect.)
Random5 (Vect.)
Random6 (Vect.)
These types cause Random 1–3 to change smoothly. They can be used to simulate the instability of acoustic instruments etc.

Frequency **[00…99]**

Sets the LFO frequency. A setting of **99** is the fastest.

Ofs (Offset) **[–99…+99]**

Specifies the central value of the LFO waveform.
For example, with a setting of **0** as shown in the following diagram, the vibrato that is applied will be centered on the note-on pitch. With a setting of **+99**, the vibrato will only raise the pitch above the note-on pitch, in the way in which vibrato is applied on a guitar.
When "Waveform" is set to **Guitar**, the modulation will occur only in the positive (+) direction even if you set "Offset" to **0**.

Offset settings and pitch change produced by vibrato

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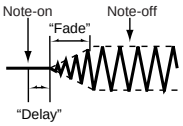
Key Sync. **[Off, On]**

On (checked): Key Sync. will be **On**. The LFO will start each time you play a note, and an independent LFO will operate for each note.
Off (unchecked): Key Sync. will be **Off**, and the LFO effect that was started by the first-played note will continue to be applied to each newly-played note. (In this case, "Delay" and "Fade" will be applied only to the LFO when it is first started.)

Fade **[00…99]**

Specifies the time from when the LFO begins to apply until it reaches the maximum amplitude. When "Key Sync." is **Off**, the fade will apply only when the LFO is first started.

How "Fade" affects the LFO (when "Key Sync." is **On**)



Dly (Delay) **[00…99]**

Specifies the time from note-on until the LFO effect begins to apply.
When "Key Sync." is **Off**, the delay will apply only when the LFO is first started.

5.3–1b: Freq.Mod (Frequency Modulation)

You can use two alternate modulation sources to adjust the speed of the OSC1 LFO1.

AMS1 (Freq. AMS1) **[Off, (PEG, FEG, AEG, LFO2, KT, EXT)]**

Indicates the source that will adjust the frequency of the oscillator 1 LFO1 (☞p.212 "AMS List"). OSC1 LFO1 can be modulated by OSC1 LFO2.

Int (AMS1 Intensity) **[–99…+99]**

Specifies the depth and direction of the effect that "AMS1 (Freq. AMS1)" will have.
When this parameter is set to a value of **16**, **33**, **49**, **66**, **82**, or **99**, the LFO frequency being can be increased by a maximum of 2, 4, 8, 16, 32, or 64 times respectively (or decreased by 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64 respectively).
For example, if "AMS1 (Freq. AMS1)" is **Note No.**, **positive (+) values** of this parameter will cause the oscillator 1 LFO to speed up as you play higher notes. **Negative (–) values** will cause the oscillator 1 LFO to slow down as you play higher notes. This change will be centered on the C4 note.
If "AMS1 (Freq. AMS1)" is set to **JS +Y #01**, raising the value of this parameter will cause the oscillator 1 LFO1 speed to increase as the joystick is moved away from yourself. With a setting of **+99**, moving the joystick all the way away from yourself will increase the LFO speed by approximately 64 times.

AMS2 (Freq. AMS2) **[Off, (PEG, FEG, AEG, LFO2, KT, EXT)]**

Int (AMS2 Intensity) **[–99…+99]**

Indicates settings for a second alternate modulation source that will adjust the frequency of the oscillator 1 LFO1.

☞"AMS1 (Freq. AMS1)," "Int. (AMS1 Intensity)"

5.3–1c: MIDI/Tempo Sync. (Frequency MIDI/Tempo Sync.)

Sync. (MIDI/Tempo Sync.) **[Off, On]**

On (checked): The LFO frequency will synchronize to the tempo (MIDI Clock). In this case, the values you specified for "Frequency" (5.3–1a) and "Freq.Mod" (5.3–1b) will be ignored.

Base Note (Sync. Base Note)
[𝅘𝅥𝅯, 𝅘𝅥𝅯₃, 𝅘𝅥𝅮, 𝅘𝅥𝅮₃, ♩, 𝅗𝅥₃, 𝅗𝅥, 𝅝]

Times (Sync. Times) **[01…16]**

When "Sync. (MIDI/Tempo Sync.)." is **checked**, these When "Sync. (MIDI/Tempo Sync.)" is checked, these parameters specify a note length "Base Note (Sync. Base Note)" relative to "♩(Tempo)" and the multiple "Times (Sync. Times)" that will be applied to it. These parameters will determine the frequency of the OSC1 LFO1. For example if "Base Note (Sync. Base Note)" is ♩(quarter note) and "Times (Sync. Times)" is **04**, the LFO will perform one cycle every four beats.
Even if you change the "♩(Tempo)" setting of the arpeggiator or sequencer, the LFO will always perform one cycle every four beats.

■ 5.3–1d: UTILITY

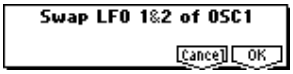
☞"Write Program" (1.1–1c)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Swap LFO 1&2

This exchanges the settings of LFO 1 and 2. If LFO2 is selected in AMS1 (Freq. AMS1) or AMS2 (Freq. AMS2) of LFO1 Freq.Mod (5.3–1b), then these settings will be invalid for LFO2 after LFO1 and 2 have been exchanged. If you select this from the OSC1 LFO1 or OSC1 LFO2 page, LFO1 and LFO2 of OSC1 will be exchanged.

① Select "Swap LFO 1&2" to access the dialog box.



② To execute, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

5.3–2: 1LFO2 (OSC1 LFO2)

Here you can make settings for the OSC1 LFO2, which is the second LFO that can be applied to oscillator 1. (☞"5.3–1: OS1LFO1 (OSC1 LFO1)") However, it is not possible to use the **LFO** to apply modulation in "AMS1 (Freq. AMS1)" or "AMS2 (Freq. AMS2)" of Freq. Mod.

5.3–3: 2LFO1 (OSC2 LFO1)

This can be used when "Mode (Oscillator Mode)" (2.1–1a) is set to **Double**. Here you can make settings for the OSC2 LFO1, which is the first LFO that can be applied to oscillator 2 (☞"5.3–1: OS1LFO1 (OSC1 LFO1)").

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5.3–4: 2LFO2 (OSC2 LFO2)

This can be used when “Mode (Oscillator Mode)” (2.1–1a) is set to **Double**. Here you can make settings for the OSC2 LFO2, which is the second LFO that can be applied to oscillator 2 (☞“5.3–1: OS1LFO1 (OSC1 LFO1)” and “5.3–2: OS1LFO2 (OSC1 LFO2)”).

PROG 6.1: Ed–Arp. (Arpeggiator)

Here you can make settings for the arpeggiator used in the program.
These arpeggiator settings can be linked when you switch programs. To link, check the **Program** item in “Auto Arp. “Program” (GLOBAL 1.1–1c): **On**.

The arpeggiator can be switched on / off by the [ARP ON / OFF] key. When on, the key LED will light.
The settings of the REALTIME CONTROLS C-mode [TEMPO] knob, [ARP-GATE] knob, [ARP-VELOCITY] knob, and [ARP ON / OFF] key can be saved for each program.

These settings will be valid when Auto Arp. “Program” is **On**.

MIDI You can control the arpeggiator from an external sequencer, or record arpeggio note data on an external sequencer. (☞p.239)

note “Pattern,” “Resolution,” “Octave,” “Sort,” “Latch,” “Key Sync.,” “Keyboard,” and “♩(Tempo)” can also be set in the Arp. Play page of 1.1:Play.

6.1–1: Setup (Arpeg. Setup)

6.1–1a: Arpeggiator Setup

☞Refer to BG p.99.

Pattern* **[P000...P004, U000(INT)...U215(User)]**

Selects the arpeggio pattern.

P000: UP	Preset Arpeggio Pattern
P001: DOWN	Preset Arpeggio Pattern
P002: ALT1	Preset Arpeggio Pattern
P003: ALT2	Preset Arpeggio Pattern
P004: RANDOM	Preset Arpeggio Pattern
U000(INT)...U199(INT)	for Preloaded User Arpeggio Pattern
U200(User)...U215(User)	for User Arpeggio Pattern

P000–P004 are preset arpeggio patterns, **U000 (INT)–U215(User)** are user arpeggio patterns. User arpeggio patterns can be created in GLOBAL 6.1.

note Arpeggio patterns **U000 (INT)–U215(User)** can be selected using the numeric keys [0]–[9] and the [ENTER] key.

Octave* **[1, 2, 3, 4]**

Specifies the number of octaves in which the arpeggio will be played.

If a user arpeggio pattern is selected, the range of the arpeggio will depend on the “Octave Motion” (GLOBAL 6.1–1c) setting.

Reso (Resolution)* **[𝅘𝅥𝅯₃ , 𝅘𝅥𝅯 , 𝅘𝅥𝅯₃ , 𝅘𝅥𝅮 , 𝅗𝅥₃ , 𝅗𝅥]**

Specifies the timing resolution of the arpeggio. The notes of the arpeggio will be played at the interval you specify: 𝅘𝅥𝅯₃ , 𝅘𝅥𝅯 , 𝅘𝅥𝅯₃ , 𝅘𝅥𝅮 , 𝅗𝅥₃ , or 𝅗𝅥. The speed of the arpeggio pattern is determined by the “♩(Tempo)” and the “Resolution.”

Gate **[000...100(%), Step]**

Specifies the length (gate time) of each note in the arpeggio.

000–100(%): Each note will be played with the specified gate time.
Step: This is available when an user arpeggio pattern **U000 (INT)–U215(User)** is selected for “Pattern.” When this is selected, the gate time specified for each step will be used.

The gate time can also be controlled by the REALTIME CONTROLS C-mode [ARP-GATE] knob. Rotating the knob toward the left will shorten the gate time, and rotating it toward the right will lengthen the gate time. When the knob is at the 12 o’clock position, the gate time will be as specified here.

Velocity **[001...127, Key, Step]**

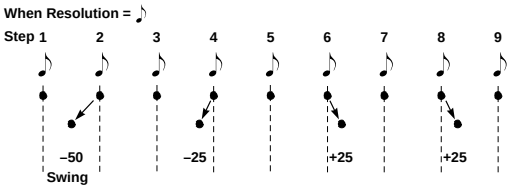
Specifies the velocity of the notes in the arpeggio.

001–127: Each note will sound with the specified velocity value.
Key: Each note will sound with the velocity value at which it was actually played.
Step: This is available when an user arpeggio pattern **U000 (INT)–U215(User)** is selected for “Pattern.” When this is selected, the velocity specified for each step will be used.

The velocity can also be controlled by the REALTIME CONTROLS C-mode [ARP-VELOCITY] knob. Rotating the knob toward the left will decrease the velocity, and rotating it toward the right will increase the velocity. When the knob is at the 12 o’clock position, the velocity will be as specified here.

Swing **[–100...+100(%)]**

This parameter shifts the timing of the odd-numbered notes of the arpeggio.



Sort* **[Off, On]**

This specifies the order in which the notes you press will be arpeggiated.

On (checked): Notes will be arpeggiated in the order of their pitch, regardless of the order in which you pressed them.
Off (unchecked): Notes will be arpeggiated in the order in which you pressed them.

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Latch* **[Off, On]**

Specifies whether or not the arpeggio will continue playing after you take your hand off the keyboard.
On (checked): The arpeggio will continue playing after you remove your hand from the keyboard.
Off (unchecked): The arpeggio will stop when you remove your hand from the keyboard.

Key Sync.* **[Off, On]**

Specifies whether the arpeggio pattern will begin when you press a key, or whether it will always follow the "♩(Tempo)" setting.
On (checked): The arpeggio pattern will start playing from the beginning when a note-on occurs from a condition where no keys are pressed. This setting is suitable when you are playing in realtime and want the arpeggio to play from the beginning of the measure.
Off (unchecked): The arpeggio pattern will always play according to the "♩(Tempo) ."

Keyboard* **[Off, On]**

This specifies whether the notes you play on the keyboard will be sounded as usual in addition to being sounded as part of the arpeggio.
On (checked): The notes you play will be sounded on their own, in addition to being sounded as part of the arpeggio. For example if you simultaneously press two or more notes, they will be sounded as usual in addition to being played as arpeggiated notes.
Off (unchecked): Only the arpeggiated notes will be heard.

* These parameters can also be set in "1.1–3: Arp."

6.1–1b: Arpeggiator Tempo

♩ (Tempo) **[040...240, EXT]**

Sets the tempo.
This can also be set by the REALTIME CONTROLS C-mode [TEMPO] knob. When "MIDI Clock" (GLOBAL 2.1–1a) is either **External**, this will indicate **EXT**, and the arpeggiator will synchronize to MIDI Clock messages received from an external MIDI device.

■ 6.1–1c: UTILITY

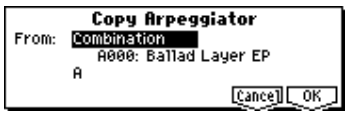
☞"Write Program" (1.1–1c)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Copy Arpeggiator

This command copies arpeggio settings.

① Select "Copy Arpeggiator" to access the dialog box.

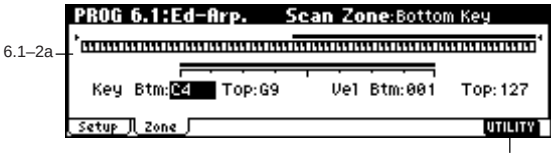


② In "From" specify the copy source arpeggio settings (mode, bank, number).

③ If you are copying from Combination or Song, specify whether you wish to copy from **A** or **B**.

④ To execute the Copy Arpeggio operation, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

6.1–2: Zone (Scan Zone)



6.1–2a: Scan Zone

Zone Map

This shows the "Scan Zone" setting.

Key:

Btm (Bottom Key) **[C–1...G9]**
Top (Top Key) **[C–1...G9]**

These parameters specify the range of notes (keys) for which the arpeggiator will function. "Top" is the upper limit, and "Btm" is the lower limit.

Vel:

Btm (Bottom Velocity) **[001...127]**
Top (Top Velocity) **[001...127]**

Specifies the range of velocities for which the arpeggiator will function. "Top" is the upper limit, and "Btm" is the lower limit.

note The note number and velocity can also be specified by holding down the [ENTER] key and pressing a note on the keyboard.

■ 6.1–2b: UTILITY

☞"Write Program" (1.1–1c), "Copy Arpeggiator" (6.1–1c)

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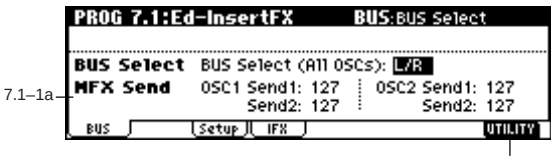
PROG 7.1: Ed–InserFX

☞For details on insertion effect, refer to p.155 “7. Effect Guide.”

7.1–1: BUS

These settings specify the bus on which the output of the oscillator will be sent, and adjust the send levels to the master effects.

The following diagram shows the LCD screen when “Mode (Oscillator Mode)” (2.1–1a) is set to **Single** or **Double**.



7.1–1a: BUS

BUS Select:

BUS Select (All OSCs) **[L/R, IFX, 1, 2, 1/2, Off]**

Specifies the bus to which oscillators 1 and 2 will be sent.

If this is set to **1/2**, the oscillator pan settings (5.1–1b, 5.2–1) will be used to output the sound in stereo from AUDIO OUTPUT (INDIVIDUAL) 1/2. When the oscillator pan is controlled by CC#10 (pan) or AMS (Alternate Modulation Source), the sound will be output with the pan setting that is in effect at note-on. Unlike the case when this is set to **L/R** to output the sound from (MAIN) L/MONO and R, the pan of a sounding note will not change in real-time.
If you wish to adjust the pan in real-time while playing a note and output the sound from AUDIO OUTPUT (INDIVIDUAL) 1/2, set “BUS Select” to **IFX**, set “IFX” to **00: No Effect**, and set the “BUS Select” (7.1–2a) after passing through IFX to **1/2**.

MFX Send:

OSC1 Send1 **[000...127]**

Sets the volume (send level) at which the output of OSC1 will be sent to master effect 1. This is valid when “BUS Select” is set to **L/R** or **Off**.
If “BUS Select” is set to **IFX**, the send levels to master effect 1 and 2 are set by “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” (7.1–2a) after passing through IFX of the Setup page.

OSC1 Send2 **[000...127]**

Sets the volume (send level) at which the output of OSC1 will be sent to master effect 2 (☞“OSC1 Send1”).

OSC2 Send1 **[000...127]**

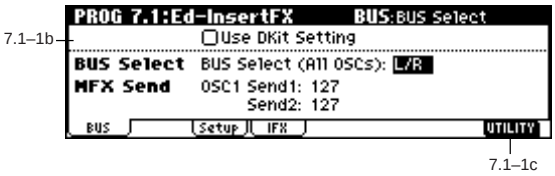
OSC2 Send2 **[000...127]**

Sets the volume (send level) at which the output of OSC2 will be sent to master effects 1 and 2. These parameters will be valid when “Mode (Oscillator Mode)” (2.1–1a) is set to **Double** and “BUS Select” is set to **L/R** or **Off** (☞“OSC1 Send1”).

MIDI CC#93 will control the Send 1 level for OSC 1 and 2, and control change #91 will control the Send 2 level for OSC 1 and 2. These are controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a).
The actual send level is determined by summing these values with the send level setting of each oscillator.

7.1–1b: Use DKit Setting

The LCD screen shown below is for when “Mode (Oscillator Mode)” (2.1–1a) is set to **Drums**.



Use DKit Setting **[Off, On]**

This will be available when “Mode (Oscillator Mode)” is set to **Drums**.

On (checked): The “BUS (BUS Select)” (GLOBAL 5.1–3a) setting for each key of the selected drum kit will be used. Check this when you want to apply an insert effect to an individual drum instrument, or to output an individual drum instrument to one of the AUDIO OUTPUT (INDIVIDUAL) jacks.
If the “Mode (Oscillator Mode)” is **Single** or **Double**, this setting has no effect.
Off (unchecked): The setting of the “BUS Select,” “MFX Send” (7.1–1a) parameter described below will be used. All drum instruments will be sent to the specified bus.

■ 7.1–1c: UTILITY

☞“Write Program” (1.1–1c)

For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

Copy Insert Effect

This command copies effect settings from Program, Combination, Song, or Sampling mode (if the EXB-SMPL option is installed).

① Select “Copy Insert Effect” to access the dialog box.

② In “From” select the copy source mode, bank, and number.

note You can use the Bank [A]–[GM] keys to select the bank.

③ Select the effect that you wish to copy. You can also copy from a master effect.

If you are copying from a master effect, the result may not be identical, due to differences in the routing and level settings of a master effect.

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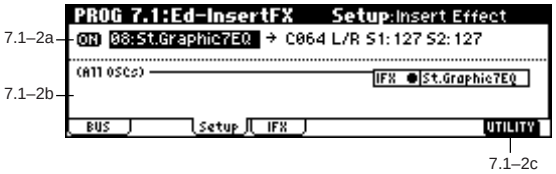
④ If you **check** “Post IFX Mixer Setting,” the “Pan (CC#8),” “BUS Select,” “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” settings that follow the copy source insert effect will also be copied. If you **do not check** this, only the effect type and its parameters will be copied.

⑤ To execute the Copy Insert Effect command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

7.1–2: Setup

Here you can select the type of insert effect, turn it on / off, pan etc.
The direct sound (Dry) of an insert effect is always stereo input and output. The input / output of the effect sound (Wet) will depend on the effect type (☞p.156).



7.1–2a: InsertFX Setup

IFX On / Off **[Off, ON]**

Selects the insert effect on / off.
When this is **Off**, the input will be output without change. (For **00: No Effect**, on / off will produce the same result.)

MIDI Separately from this setting, you can use control change #92 to turn off insert effect. A value of **0** will be off, and a value of **1–127** will be the original setting. This message is received on the global MIDI channel specified by “MIDI Channel” (GLOBAL 2.1–1a).

Insert Effect **[00...89: name]**

Indicates the type of insert effect.
For “Insert Effect” you can select from 89 types of effect: **01: St.Amp Sim – 89: Reverb-Gate**.

These effects can also be selected by category in Utility “Select by Category” (7.1–2c).

Pan(CC#8) (Post IFX Pan CC#8) **[L000...C064...R127]**

Sets the pan after the sound has passed through the insert effect. This setting is valid only when the “BUS Select” from the IFX output is set to **L/R** (☞p.158).

MIDI CC#8 will control the pan amount.

BUS Select **[L / R, 1, 2, 1 / 2, Off]**

Specifies the bus to which the sound will be sent after passing through the insert effect. Normally you will set this to **L/R**. If you wish to output to AUDIO OUTPUT (INDIVIDUAL), set this to **1**, **2** or **1/2**. The **Off** setting is used when you wish to use “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” and in addition connect to the master effects in series.

S1 (Send1(MFX1)) **[000...127]**
S2 (Send2(MFX2)) **[000...127]**

Sets the send levels to the master effects 1 and 2 for the sound that has passed through the insert effect. These settings are valid when “BUS Select” (7.1–1a) has been set to **L/R** or **Off**.

MIDI Control change CC#93 will control the Send 1 level, and control change CC#91 will control the Send 2 level. These messages are received on the global MIDI channel specified by “MIDI Channel” (GLOBAL 2.1–1a).

7.1–2b: Routing

This displays the status of the insert effect.

This displays the routing of the insert effect, the specified effect name, and the on / off status.
You can select (**All OSCs**) and use the VALUE controller to specify “BUS Select” (☞7.1–1a).

■ 7.1–2c: UTILITY

☞“Write Program” (1.1–1c), “Copy Insert Effect” (7.1–1c)

For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

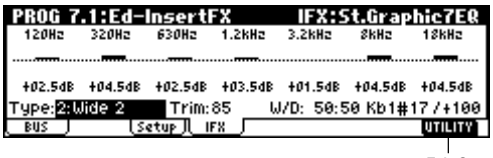
Select by Category

Selects insert effect by category.
For the procedure, refer to “Select by Category” (☞p.2).

note This command is valid when the 7.1–2a parameters are selected.

7.1–3: IFX (Insert Effect)

Here you can set the effect parameters for the IFX that was selected in the Setup page (☞p.164–).



MIDI Effect dynamic modulation (Dmod) is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a). (☞p.217 “Dynamic Modulation Source (Dmod)”)

■ 7.1–3a: UTILITY

☞“Write Program” (1.1–1c)

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PROG 7.2: Ed–MasterFX

☞For details on master effects, refer to p.155 “7. Effect Guide.”

7.2–1: Setup

Here you can select the master effect types, switch them on / off, specify chain order, and set the master EQ.

7.2–1a: Master Effect Setup

The master effects do not output the direct sound (Dry). The return level (“Rtn 1, 2”) sends the effect sound (**Wet**) to the L and R bus, and this is mixed with the direct sound (“BUS Select” **L/R**: 7.1–1a, 7.1–2a).
The master effects are monaural input. The sound that is panned to L and R after passing through the oscillator and insert effect is mixed to a monaural signal as adjusted by the “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” levels, and input to the master effects.

The master effects are **mono-in stereo-out**. Even when a stereo-input type effect is selected, the input will be monaural.

MFX1 On / Off, MFX2 On / Off **[Off, ON]**

Switches master effect 1, 2 on / off. When off, the output will be muted.

MIDI Separately from this setting, you can use CC#94 to switch master effect 1 on / off, CC#95 to switch master effect 2 on / off. A value of **0** will be off, and a value of 1–127 will be the original setting. This is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a).

Master Effect 1, 2 **[00...89: name]**

Indicates the effect type for master effect 1, 2. You can select from 89 types of effect: **01: St.Amp Sim–89: Reverb-Gate**. If **00: No Effect** is selected, the output from the master effect will be muted.

Rtn 1, 2 (Return 1, 2) **[000...127]**

Adjusts the return levels from the master effects to the L / R bus (main output L / MONO, R).

7.2–1b: Chain

MFX Chain **[Off, On]**

On (checked): Chain (series connection) will be turned on for MFX1 and MFX2. (☞p.161)
Off (unchecked): MFX 1 and MFX2 are operating in parallel.

Direction (Chain Direction)
[MFX1→MFX2, MFX2→MFX1]

Specifies the direction of the connection when MFX1 and MFX2 are chained.

MFX1→MFX2: Connect from MFX1 to MFX2.
MFX2→MFX1: Connect from MFX2 to MFX1.

Signal (Chain Signal) **[L / R Mix, L Only, R Only]**

When chain is On, this parameter specifies how the stereo output signal of the first master effect will be connected to the input (mono) of the next master effect.

L/R Mix: The stereo output L / R of the first master effect will be mixed before being input to the next master effect.
L Only, R Only: Only the left or right channel of the output will be input to the next master effect.

Level (Chain Level) **[000...127]**

Sets the send level from the first master effect to the next master effect when chain is turned on.

7.2–1c: Master EQ Gain [dB]

Sets the amount of cut and boost for the three-band EQ located immediately before the AUDIO OUTPUT (MAIN OUT) L / MONO and R jacks. This is linked with the various “Gain” parameters of Master EQ (7.2–4).

Low **[–18.0...+18.0]**
Mid **[–18.0...+18.0]**
High **[–18.0...+18.0]**

The cutoff frequency for “Low,” “Mid” and “High” and the “Q” of “Mid” can be adjusted in the MEQ page. These settings are in “dB” units.

■ 7.2–1d: UTILITY

☞“Write Program” (1.1–1c)

For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

Copy Master Effect

This command lets you copy any desired effect settings from Program, Combination, Song.

① Select “Copy Master Effect” to access the dialog box.

② In “From,” select the copy source mode, bank, and number.
You can use the Bank [A]–[GM] keys to select the bank.

③ Select the effect that you wish to copy. If you select **MFX 1** or **2**, “Rtn (Return)” (return level) will be copied at the same time. If you select **Master EQ**, only the master EQ settings will be copied. You can also copy from an insert effect. If you **check** “All,” all settings of the master effects and master EQ will be copied.

If you copy from an insert effect the result may not be identical, due to differences in routing and level settings.

④ In “To,” select the copy destination master effect.

⑤ To execute the Copy Master Effect command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

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Swap Master Effect

This command swaps (exchanges) the settings of MFX1 and MFX2.

① Select “Swap Master Effect” to access the dialog box.

② To execute the Swap Master Effect command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Select by Category

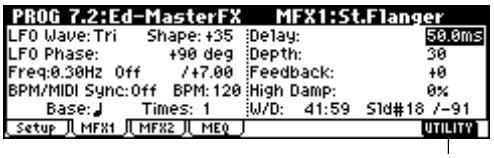
Selects master effects by category.
For the procedure, refer to “Select by Category” (☞p.2).

note This command is valid when the 7.2–1a parameters are on.

7.2–2: MFX 1 (Master Effect1)

7.2–3: MFX 2 (Master Effect2)

Indicates effect parameter settings for the MFX1 and 2 effects that were selected in the Setup page (☞p.164–).



7.2–2a

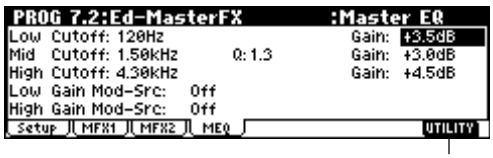
MIDI Effect dynamic modulation (Dmod) is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a). (☞p.217 “Dynamic Modulation Source (Dmod)”)

■ 7.2–2(3)a: UTILITY

☞“Write Program” (1.1–1c)

7.2–4: MEQ (Master EQ)

The master EQ is a three-band stereo EQ. It is used to adjust the overall tonality of the sound immediately before the L / R bus is output to the AUDIO OUTPUT (MAIN OUT) L / MONO and R jacks (☞p.209). The MEQ High Gain and the MEQ Low Gain can be controlled by assigning a modualtion source to the “Low Gain Mod-Src.” and “High Gain Mod-src.” functions on this page.



7.2–4a

■ 7.2–4a: UTILITY

☞“Write Program” (1.1–1c)

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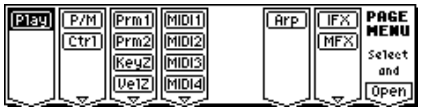
2. Combination mode

COMBI PAGE MENU

For details on how to select pages in Combination mode, refer to p.1.



Play	1.1: Play	Select and play combinations. Select a program for each timbre, and set status, pan, and level. Select an arpeggio pattern and make settings. (☞p.31)
P/M	2.1: Ed-Prog/Mix	Select a program for each timbre, and set pan and level. (Same as the 1.1: Play parameters; can be edited from either page.) (☞p.35)
Ctrl	2.2: Ed-Ctrl	Controller settings. (☞p.36)
Prm1	3.1: Ed-Param1	MIDI, OSC, and Pitch settings for each timbre. (☞p.36)
Prm2	3.2: Ed-Param2	Delay and scale settings for each timbre. (☞p.38)
KeyZ	3.3: Ed-Key Zone	Key zone settings for each timbre. (☞p.39)
VelZ	3.4: Ed-Vel Zone	Velocity zone settings for each timbre. (☞p.40)
MIDI1	4.1: Ed-MIDI Filter1	MIDI message transmission/reception filter settings for each timbre, such as Prog Change and After Touch. (☞p.41)
MIDI2	4.2: Ed-MIDI Filter 2	Filter settings such as JS and Ribbon Ctrl. (☞p.41)
MIDI3	4.3: Ed-MIDI Filter 3	Filter settings; REALTIME CONTROL Knob (☞p.42)
MIDI4	4.4: Ed-MIDI Filter 4	Filter settings; SW, Other Ctrl Change (☞p.42)
Arp	6.1: Ed-Arp.	Arpeggiator settings. (Same as the 1.1: Play parameters; can be edited from either page.) (☞p.43)
IFX	7.1: Ed-InsertFX	Bus and master effect send level settings for each timbre. Insert effect routing, selection, and settings. (☞p.45)
MFX	7.2: Ed-MasterFX	Master effect selection and settings. Master EQ settings. (☞p.47)

COMBI 1.1: Play

In this display page you can select and play Combinations. A Combi allows you to use up to 8 programs at one time from the keyboard.

1.1–1: Combi (Combination)

1.1–1a: Bank, Combi Select, Category, Cat.Hold, 10's Hold, ♩(Tempo)

Bank (Bank Select) **[Bank A…C]**

This is the Combination bank display.
Use the front panel BANK [A]–[C] keys to select the bank.

On this instrument, there are a total of 384 combination programs in three rewritable banks (**A**, **B**, **C**), each containing 128 combinations. (☞For a list of the factory-set combinations, refer to the separate VNL.)

Bank A	Preloaded combinations
Bank B	
Bank C	

If you have selected the "Program Select" (1.1–2c) edit cell for one of the timbres 1–8 in the Prog page, Bank [A]–[GM] will switch the program banks for timbres 1–8.

Combi Select (Combination Select) **[0…127: name]**

Here you can select a combination. Select this parameter, and use the [INC], [DEC] keys, numeric keys [0]–[9], or the [VALUE] dial to select a combination. You can also select combinations by category, or using "10's Hold." (☞p.2 "Cat.HOLD," "Select by Category," "10's HOLD")

MIDI You can select Combis by receiving MIDI program changes via a connected external MIDI device, or by using a foot switch. (☞p.125 "Foot SW Assign" (GLOBAL 1.1–3a), p.222 "Foot Switch Assign List")

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Category [00...15: name]

This is the combination category display.
All combinations are organized into sixteen categories. You can select a category, and then select from combinations that belong to that category.
To select combinations by category, use “Cat.HOLD” and Utility “Select by Category.” (☞PROG 1.1–1a)

note To specify the category for a combination, use Utility “Write Combination” (1.1–1c). To modify a category name, use “Category Name Comb. 00–07, 08–15” (GLOBAL 4.1–3/4).

Cat.HOLD

Press the [./HOLD] key and the display will indicate Cat.HOLD. The category will be held (fixed). (☞PROG 1.1–1a)
To cancel, press the [./HOLD] key twice to turn off the Cat.HOLD display.

10's HOLD

When you press the [./HOLD] key a second time, the display will indicate 10's HOLD, and the first digit of the combination number will be fixed. (☞PROG 1.1–1a)
To cancel, press the [./HOLD] key to turn off the 10's HOLD display.

♩ (Tempo) [040...240, EXT]

Sets the tempo of the arpeggiator. This can be adjusted by the REALTIME CONTROLS C-mode [TEMPO] knob.
EXT will be displayed if “MIDI Clock” (GLOBAL 2.1–1a) is set to **External**, and the arpeggiator will synchronize to the MIDI clock received from an external MIDI device.
This parameter can also be set from 6.1: Ed-Arp.

1.1–1b: Combination Information

This displays information for the selected combination. The functions assigned to [SW1], [SW2], and REALTIME CONTROLS B-mode [ASSIGNABLE 1–4] knobs will be displayed.

■ 1.1–1c: UTILITY

For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

Write Combination

This command writes an edited combination into this instrument's internal memory. Be sure to write any combination that you wish to keep. If the power is turned off or a different combination selected before you write an edited combination, your edits cannot be recovered.

For the procedure, refer to “Write Program” (PROG 1.1–1c).

If you use “Category” to specify a category for the combination that you are writing, you will be able to select it by category when selecting combinations in COMBI 1.1: Play.

note When you press the [REC/WRITE] key, the “Update Combination” dialog box will appear. Here also you can write to the currently selected combination.

Solo Selected Timbre

The Solo function will alternately be switched on/off each time you select “Solo Selected Timbre.”

① From the utility menu, choose “Solo Selected Timbre,” and press the [F8] (“OK”) key to execute the command. When you execute this, a check mark will appear at the left of the “Solo Selected Timbre” menu item, and the Solo function will be on.

② In pages that show parameters for an individual timbre, you can select a timbre to Solo (in 1.1: Play, Prog page “Program Select,” etc.) so that only that timbre will sound and the other timbres will be muted. The “Selected Timbre Information” (1.1–2d) in each page will indicate “Solo.”
To solo a different timbre, select a parameter of the timbre that you wish to solo.

note You can move to timbres “T1”–“T8” by holding down the [TIMBRE/TRACK] key and pressing one of the [F1](T1/T9)–[F8](T8/T16) keys.

③ To defeat the Solo function, choose “Solo Selected Timbre” from the utility menu once again, and press the [F8] (“OK”) key to cancel it.

note If a timbre that is muted by the Solo function has been set to a “Status” (3.1–1a) of **EXT** or **EX2**, MIDI note-on/off messages will not be transmitted by that timbre.

Select by Category

Selects a combination by category.
For the procedure, refer to “Select by Category” (☞p.2)

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1.1–2: Prog (Timbre Program)

Indicates the program that will be used by each timbre.

1.1–2a: Bank, Combi Select, Cat.Hold, 10's Hold, ♩ (Tempo)

Bank **[Bank A…C]**

Combi Select (Combination Select) **[0…127: name]**

Cat. (Cat. HOLD)

10's (10's HOLD)

♩ (Tempo) **[040…240, EXT]**

In the same way as in the Combi page, select a combination and set the tempo of the arpeggiator. (☞1.1–1a)

1.1–2b: Timbre Number & Category

Timbre Number & Category 1...8

This displays the timbre number and an abbreviated category name.

1.1–2c: Program Select, Program Name

Program Select [A000...g128]

Indicates the program that will be used by each timbre.

When "Program Select" is selected, you can use the Bank [A]–[GM] key, VALUE controller to select a program. "Program Select" settings can also be made in the Prog page of 2.1: Ed-Prog / Mix.

You can also use Utility "Select by Category" to select programs by category.

note You can move to timbres "T1"–"T8" by holding down the [TIMBRE / TRACK] key and pressing one of the [F1](T1 / T9)–[F8](T8 / T16) keys.

MIDI When you select a combination on this instrument, a MIDI program change for the selected combination number will be transmitted on the global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a). At the same time, bank select, program change, and volume (CC#7) messages will be transmitted on the MIDI channel specified for each timbre that is set to "Status" (3.1–1a) of **EXT** or **EX2**. However, these messages will not be transmitted for timbres that are set to the same MIDI channel as the global MIDI channel. In this case, **EX2** timbres will show the "Program Select" Bank as "–", and will transmit the bank number that was specified in "Bank (EX2) MSB"and "Bank (EX2) LSB" (3.1–1a).

MIDI messages transmitted when you operate this instrument are transmitted on the global MIDI channel. At the same time, timbres whose "Status" is **EXT** or **EX2** will transmit the same messages on their own MIDI channel.

If bank select and program change messages are received on a MIDI channel that matches the MIDI channel of a timbre whose "Status" (3.1–1a) is **INT**, the program of that timbre will change. However if the MIDI channel of the incoming message matches the global MIDI channel "MIDI Channel," then the combination will change.

If you do not want the combination to change, you can either change the global MIDI channel so that it does not match the channel on which the program change messages are being received, or you can **uncheck** "Combi (Combi Change)" (GLOBAL 2.1–1b). Alternately, you can **uncheck** "Bank (Bank Change)" (GLOBAL 2.1–1b) so that only the program number will change and the bank will remain the same.

If you wish to change a program without changing the combination, you can also set "Program Change" (4.1–1a) so that the program will change on certain timbres but not on others.

Program Name

This displays part of the program name selected for the timbre. In the case of the the GM drums bank, drums bank (d) will be indicated.

1.1–2d: Selected Timbre Information

This shows information on the timbre (1–8) that is currently selected for editing.

Timbre No.: Bank No., Prog No.: and name

This shows the timbre number, and the program bank, number and name selected for that timbre.

Status **(INT, Off, EXT, EX2)**

This shows the MIDI and internal tone generator status for each track.

Ch **(01...16, Gch)**

This shows the MIDI channel number specified for the timbre.

■ 1.1–2e: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Select by Category (Category / Combi, Category / Prog T1...T8)

Combinations or the programs used by each timbre can be selected by category.

If you have selected "Combi Select," selecting Utility "Select by Category" will access the Category / Combi dialog box, allowing you to select a combination by category. (☞p.32)

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If you have selected “Program Select,” selecting Utility “Select by Category” will access the Category / Prog T1…T8 dialog box, allowing you to select a program for each timbre by category.

For the procedure of selecting by category, refer to p.2.

1.1–3: Mix (Mixer)

Here you can set the pan and volume for each timbre 1–8.

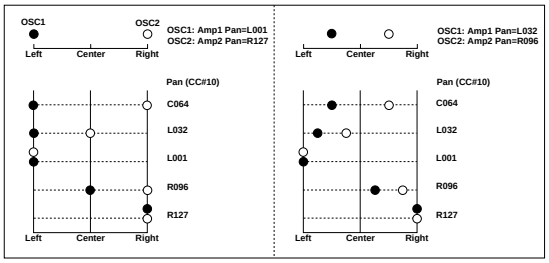
1.1–3a

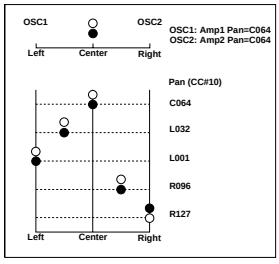
1.1–3b

1.1–3a: Pan, Volume

Pan [RND, L001...C064...R127]

Sets the pan for each timbre 1–8. (This parameter can also be set from the Mixer page of 2.1: Ed-Prog / Mix.)
L001...C064...R127: A setting of **L001** is far left and **R127** is far right. A setting of **C064** will reproduce the pan setting that was made for the oscillator in Program mode.





If a mono-type insertion effect is inserted, the setting you make here will be ignored. In this case, the “Pan (CC#8)” parameter in 7.1: Ed–InsertFX, Setup page will adjust the panning of the sound after the insertion effect (☞p.158 “3. Mixer”).

RND: The oscillator pan will change randomly at each note-on.

MIDI If “Status” (3.1–1a) has been set to **INT**, MIDI control change #10 (panpot) messages can be received to control the setting. CC#10 values of **0** or **1** will place the sound at far left, **64** at center, and **127** at far right.
Pan can be controlled by messages received on the “MIDI Channel” (3.1–1a).

Volume [000...127]

Adjusts the volume of each timbre 1–8. (This parameter can also be set from the Mixer page of 2.1: Ed-Prog / Mix.)

MIDI The volume of each timbre is determined by summing this volume value with the MIDI volume (CC#7) and expression (CC#11). If “Status” (3.1–1a) has been set to **INT**, incoming MIDI CC#7 or CC#11 messages will control the volume of a timbre. (However these messages will not affect the setting of this parameter.)
If “Status” is **EXT** or **EX2**, the value of this parameter will be transmitted as MIDI CC#7 when the combination is changed. However this will not be transmitted by a timbre that is set to the same MIDI channel as the global MIDI channel. This message is transmitted on the “MIDI Channel” (3.1–1a) specified for each timbre.

■ 1.1–3b: UTILITY

☞“Write Combination,” “Solo Selected Timbre” (1.1–1c), “Select by Category” (1.1–1c, PROG 1.1–1a)

For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

Hold Balance

Adjusts the volume of the Combi while preserving the volume balance between timbres 1–8.
Selects the “Volume” of any timbre, select “Hold Balance” from the Utility menu, and press the [F8] (“OK”) key. A check mark will appear at the left of “Hold Balance.” (The upper right of the LCD screen will indicate [Hold Bal.]) In this state, adjusting any “Volume” value will simultaneously change the volume of the other timbres as well, while preserving the volume balance between timbres 1–8.

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1.1–4: Arp. A (Arpeggio Play A)

1.1–5: Arp. B (Arpeggio Play B)

Here you can select the arpeggiator settings for the combination. A combination can run two arpeggiators simultaneously. Arpeggiator parameters can be edited in 6.1: Edit-Arp., but certain major parameters can be edited in these pages as well. You can edit these parameters in realtime, for example by changing the arpeggio pattern while playing in COMBI 1.1: Play.

To save the edits you make, use "Write Combination." The arpeggiator can also be edited in realtime by the REALTIME CONTROLS C-mode [TEMPO] knob, [ARP-GATE] knob, and [ARP-VELOCITY] knob. (☞BG p.27)

1.1–4(5)a: Arpeggiator Run, Timbre assign

Arpeggiator Run A, B (Run A, B) **[Off, On]**

When the [ARP ON / OFF] key is on, any arpeggiator that is checked here will run if it is assigned to a timbre in "Assign" (6.1–1b).
Even if the arpeggiator is on, you can turn A and B on / off independently.
This parameter can also be set from the 6.1: Ed-Arp. Setup page.

Timbre assign

This displays the timbres 1–8 to which arpeggiators A and B are assigned. This can be set in "Assign" (6.1–1b).

1.1–4(5)b: Arpeggiator A(B)

Pattern **[P000....P004, U000(INT)...U215(User)]**
Reso (Resolution) **[♪₃, ♪, ♪₃, ♪, ♩₃, ♩]**
Octave **[1, 2, 3, 4]**
Sort **[Off, On]**
Latch **[Off, On]**
Key Sync. **[Off, On]**
Keyboard **[Off, On]**

Sets the various parameters of the combination arpeggiator (☞"PROG: Ed–Arp."). These parameters can also be set in COMBI 6.1: Ed-Arp.

■ 1.1–4(5)c: UTILITY

☞"Write Combination," "Solo Selected Timbre," "Select by Category" (1.1–1c)

COMBI 2.1: Ed–Prog / Mixer

2.1–1: Prog (Timbre Program)

Indicates the bank and program for each timbre 1–8. These parameters can also be set from the 1.1: Play, Prog page.

2.1–1a: Program Select, Program Name

Program Select

Indicates the program that will be used by each timbre. (☞1.1–2c)

Program Name

This displays part of the program name selected for each timbre. (☞1.1–2c)

■ 2.1–1b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c), "Select by Category (Category / Combi, Category / Prog T1...T8)" (1.1–2e)

2.1–2: Mix (Mixer)

Specifies the pan and volume for each timbre 1–8. These parameters can also be set from the 1.1: Play, Mixer page.

2.1–2a: Pan, Volume

Pan

Sets the pan of each timbre 1–8. (☞1.1–3a)

Volume

Sets the volume of each timbre 1–8. (☞1.1–3a)

■ 2.1–1b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

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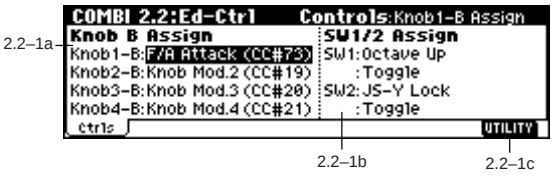
COMBI 2.2: Ed–Ctrl

Here you can set the Combination mode functions of the B-mode functions of REALTIME CONTROLS knobs [1]–[4], and [SW1] key, [SW2] key.

2.2–1: Ctrls (Controls)



2.2–1a: Knob B Assign

These settings assign functions (mainly various control changes) to the B-mode of the REALTIME CONTROLS knobs [1]–[4] (☞p.221 “Realtime Control Knobs B Assign List”).
The functions you specify here will be controlled when you operate the REALTIME CONTROLS knobs [1]–[4] in B-mode.

Since the REALTIME CONTROLS knob [1]–[4] function of the B-mode assignments made for the programs assigned to each timbre are not valid for the combination, new functions must be set by these parameters.

Knob1–B (Knob1–B Assign) AMSource **[Off...MIDI CC#95]**
Knob2–B (Knob2–B Assign) AMSource **[Off...MIDI CC#95]**
Knob3–B (Knob3–B Assign) AMSource **[Off...MIDI CC#95]**
Knob4–B (Knob4–B Assign) AMSource **[Off...MIDI CC#95]**

2.2–1b: SW1/2 Assign

These settings assign the function of the [SW1] key and [SW2] key (☞p.220 “SW1, SW2 Assign List”).

Since the function assignments of the [SW1] key and [SW2] key made for the programs assigned to each timbre are not valid for the combination, new functions must be set by these parameters.

SW1 (SW1 Assign) AMSource **[Off...AfterT Lock]**
SW1 Mode **[Toggle, Momentary]**
SW2 (SW2 Assign) AMSource **[Off...AfterT Lock]**
SW2 Mode **[Toggle, Momentary]**
(☞PROG 2.2–1b)

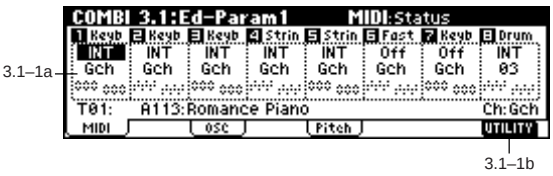
■ 2.2–1c: UTILITY

☞“Write Combination,” “Solo Selected Timbre” (1.1–1c)

COMBI 3.1: Ed–Param1

3.1–1: MIDI

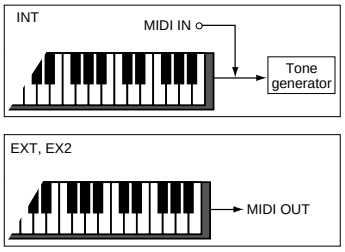
Here you can make MIDI settings for each timbre.



3.1–1a: Status, MIDI Channel, Bank(EX2) MSB/LSB

Status **[INT, Off, EXT, EX2]**

Specifies the status of MIDI and the internal tone generator for each timbre.
INT: When you play this instrument, the internal tone generator will sound, and will also sound in respond to MIDI messages received from an external MIDI device.
Off: The program will not sound. Nor will MIDI data be transmitted.
EXT: Playing this instrument will not cause it to sound, but it will transmit data via MIDI to control external MIDI devices.
EX2: “Bank (EX2) MSB” and “Bank (EX2) LSB” (3.1–1a) will be enabled. Instead of the bank numbers for A–G(d) that can be selected on this instrument, the bank numbers you specify here will be transmitted via MIDI. In other respects this is the same as **EXT**.



MIDI Channel **[01...16, Gch]**

Set the MIDI transmit/receive channel for each timbre 1–8.

Gch: The timbre will use the channel that has been selected as the global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a).

When “Status” is **INT**, MIDI messages will be received on the channel you specify here. If this setting is the same as the global MIDI channel, the internal tone generator will sound according to the internal settings. If this is set to **EXT** or **EX2**, playing this instrument will transmit MIDI messages on the MIDI channel specified here. (Messages will also be transmitted simultaneously on the global MIDI channel.)

Bank(EX2) MSB **[000:000...127:127]**
Bank(EX2) LSB **[000:000...127:127]**

Specifies the bank number that will be transmitted when “Status” is set to **EX2**. If “Status” is not set to **EX2**, this setting has no effect.

■ 3.1–1b: UTILITY

☞“Write Combination,” “Solo Selected Timbre” (1.1–1c)

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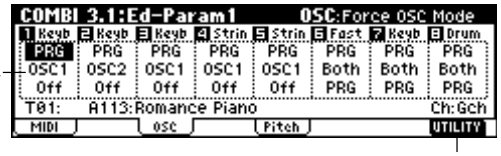
3.1–2: OSC

These settings specify how each timbre will be sounded.



3.1–2a: Force OSC Mode, OSC Select, Portamento

Force OSC Mode [PRG, Poly, Mono, LGT]

Specifies the "Mode (Voice Assign Mode)" (PROG 2.1–1b) of the program selected for each timbre 1–8.

PRG: The settings of the program will be used.
Poly: The timbre will play polyphonically, regardless of the settings of the program.
Mono: The timbre will play monophonically, regardless of the settings of the program.
LGT (Legato): The timbre will play monophonically, with single triggering (legato).

With settings of **Mono** or **LGT**, the note priority will be according to the "Priority" (PROG 2.1–1b) setting of the program.

OSC Select [Both, OSC1, OSC2]

Specifies the "Mode (Oscillator Mode)" (PROG 2.1–1a) of the program selected for each timbre 1–8. If the "Mode (Oscillator Mode)" is **Double**, you can specify that either or both oscillators sound.

Both: OSC1 and 2 will sound as specified by the settings of the program.
OSC1: Only OSC1 will sound.
OSC2: Only OSC2 will sound. If "Mode (Oscillator Mode)" is **Single** or **Drums**, there will be no sound.

Portamento [PRG, Off, 001...127]

Indicates portamento settings for each timbre 1–8.

PRG: Portamento will be applied as specified by the program settings.
Off: Portamento will be off, even if the original program settings specified for it to be on.
001...127: Portamento will be applied with the portamento time you specify here, even if it is turned off by the program settings.

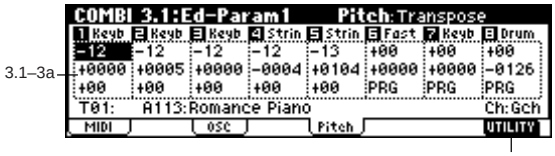
MIDI If the "Status" (3.1–1a) is set to **INT**, CC#05 (portamento time) and CC#65 (portamento switch) messages will be received to control and change this setting. (If the setting is **PRG**, CC#05 portamento time will not be received.) These messages will be received on the MIDI channel specified for each timbre by "MIDI Channel" (3.1–1a).

■ 3.1–2b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

3.1–3: Pitch

Here you can make pitch-related settings for each timbre.



3.1–3a: Transpose, Detune, Bend Range

Transpose [–24...+24]

Adjusts the pitch of each timbre in semitone steps.
12 units equal one octave.

MIDI When "Status" (3.1–1a) is **INT**, this parameter will affect the pitches sounded by the TRITON Le. When "Status" is **EXT**, this parameter will affect the note numbers of the MIDI note messages that are transmitted.
For example if you make settings of **+04** and **+07** respectively for two timbres that are set to **EXT**, playing the C key will transmit a C note number on the global MIDI channel, and at the same time will also transmit E and G note numbers on the MIDI channels of those timbres.

Detune (BPM Adj.) [–1200...+1200]

Adjusts the pitch of each timbre in one-cent units.
0: Normal pitch.

note You can also use the Utility "Detune BPM Adj." (3.1–3b) page menu command to automatically make a detune setting from a calculation in BPM units.

MIDI "Transpose" and "Detune" can be controlled via MIDI RPN messages. Depending on the "Mode (Oscillator Mode)" (PROG 2.1–1a) settings of the programs used by timbres 1–8, they can be controlled as follows.
When "Mode (Oscillator Mode)" is **Single** or **Double** MIDI RPN Coarse Tune can be received to control and change the setting of "Transpose," and RPN Fine Tune can be received to control and change the setting of "Detune."
When "Mode (Oscillator Mode)" is **Drums**, MIDI RPN Coarse Tune and Fine Tune can be received to control and change the setting of "Detune." The controllable range is ±1 octave for coarse tune and fine tune together.

Bend Range [PRG, –24...+24]

Specifies the amount of pitch change that will occur when the pitch bender is operated, in semitone units.

PRG: The pitch range specified by the program will be used.
–24–+24: This setting will be used regardless of the setting in the program.

MIDI The MIDI RPN Pitch Bend Change message can be received to control this and change the setting. (However it will not be received if this parameter is set to **PRG**.) This message is received on the MIDI channel for each timbre set by "MIDI Channel" (3.1–1a).

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■ 3.1–3b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Detune BPM Adjust

If the program of a timbre uses a phrase or rhythm loop multisample or sample that was created in the Sampling mode (using the EXB-SMPL option) is matched to a specific BPM (or was loaded in Media mode), you can use this Utility to modify its BPM value. "Detune BPM Adjust" changes the BPM of a phrase or rhythm by modifying its pitch. This is valid for a track when timbre "Detune" is selected. When this Utility is executed, the selected "Detune" value will be set automatically. (☞PROG 2.1–2c, 2.1–3, GLOBAL 5.1–1b, 5.1–2)

① Select "Detune BPM Adjust" to access the dialog box.

② In "From" specify the original BPM value. In "To" specify the desired BPM value. The appropriate "Detune" value will be calculated automatically from these two values.
For example if you set "From" to **60bpm** and "To" to **120bpm**, the "Detune" parameter will be set to +1200 (one octave up).

③ To execute the Detune BPM Adjust command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

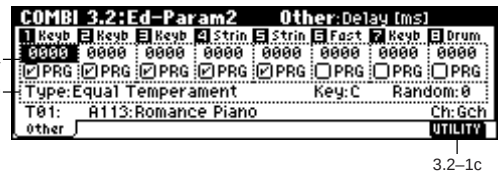
The detune value that is calculated when you execute this command will be added to "Detune" **+0000**. You must set the "From" BPM value when "Detune" is **+0000**. For example if you execute "From" **60bpm** "To" **120bpm**, and then execute "From" **120bpm** "To" **60bpm**, this will not return the original result. (Rather, this will set Detune= –1200, which is one octave down.)

note This command is valid when "Detune" (3.1–3a) is selected.

COMBI 3.2: Ed–Param2

3.2–1: Other

Specifies the delay from note-on until sound is produced for each timbre. Also specifies the scale.



3.2–1a: Delay [ms], Use Prog's Scale

Delay [ms] **[0000…5000, KeyOff]**

Specifies a delay time from note-on until the sound begins for each timbre.

KeyOff: The note will begin sounding at note-off. In this case, the sound will not die away if the sustain level of the program's amp EG is other than 0. This setting is used when creating harpsichord sounds.
Normally you will set this to **0**.

Use Prog's Scale **[Off, On]**

Each timbre can use the scale that is specified by "Scale" (PROG 2.1–1c).

On (checked): The scale specified by the program will be used.
Off (unchecked): The scale specified by "Type (Combi's Scale)" (3.2–1b) will be used.

3.2–1b: Combi's Scale, Key, Random

Specifies the scale that the combination will use.

Type (Combi's Scale)
[Equal Temperament...User Octave15]

Indicates the type of scale.
☞"Type (Scale Type)" (PROG 2.1–1c)

Key **[C…B]**

Indicates the tonic key of the selected scale.
☞"Key" (PROG 2.1–1c)

Random **[0…7]**

As this **value is increased**, an increasingly random deviation will be added to the pitch at each note-on.
☞"Random" (PROG 2.1–1c)

■ 3.2–1c: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

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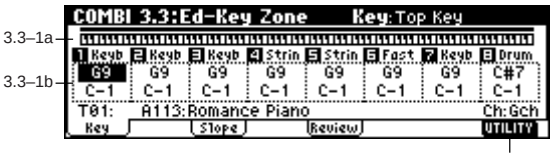
COMBI 3.3: Ed–Key Zone

These settings specify the keyboard range in which each timbre will sound.
The top / bottom key parameters specify the range of notes in which **timbres 1–8** will sound, and the top / bottom slope parameters specify the range over which the original volume will be reached.

By setting timbres of different sounds to ranges that do not overlap, you can play different sounds in different ranges of the keyboard (**Key Split**).
By setting the ranges to overlap, you can play two or more sounds with a single note (**Layer**).
If you set the slopes (the grayed portion) to overlap, the sounds will overlap, and the proportion of the overlap will change according to the keyboard location (**Positional Cross-fade**).

3.3–1: Key (Key Zone)



3.3–1a: Key Zone Map (1)

This displays the range of note data that will sound the currently selected track. The range of notes sounded is shown as a line, and the slope portion is shaded.

3.3–1b: Top Key, Bottom Key

Top Key **[C–1...G9]**

Specifies the top key (upper limit) of the notes that will sound each timbre 1–8.

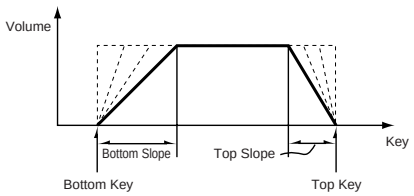
Bottom Key **[C–1...G9]**

Specifies the bottom key (lower limit) of the notes that will sound each timbre 1–8.

note You can also set this parameter by holding down the [ENTER] key and playing a note.

It is not possible to set the bottom key above the top key of the same timbre. Nor is it possible for the top and bottom slopes to overlap.

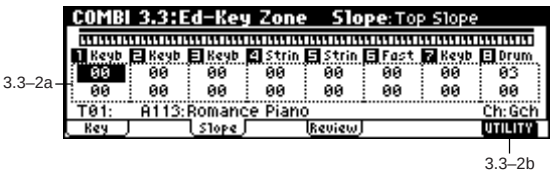
How volume will change according to keyboard location



■ 3.3–1c: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

3.3–2: Slope (Key Slope)



3.3–2a: Top Slope, Bottom Slope

Top Slope **[00...72]**

Specifies the range of keys (12 is one octave) over which the maximum programmed volume level will be reached, starting from the top key.

0: The volume will be at the original level from the top key.
12: The volume will increase gradually as you play downward, and will reach the original volume one octave below the top key.
60: The volume will increase gradually as you play downward, and will reach the original volume five octaves below the top key.

Bottom Slope **[00...72]**

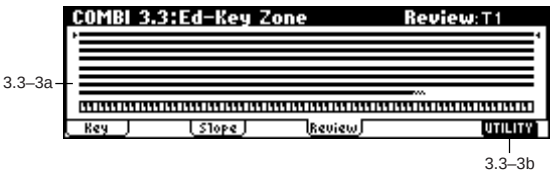
Specifies the range of keys (12 is one octave) over which the maximum programmed volume level will be reached, starting from the bottom key.

0: The volume will be at the original level from the bottom key.
12: The volume will increase gradually as you play upward, and will reach the original volume one octave above the bottom key.
60: The volume will increase gradually as you play upward, and will reach the original volume five octaves above the bottom key.

■ 3.3–2b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

3.3–3: Review



3.3–3a: Key Zone Map (All)

T1...T8

This displays the range of notes that will sound for each of the timbres 1–8. The range of notes sounded is shown as a line, and the slope portion is shaded.

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■ 3.3–3b: UTILITY

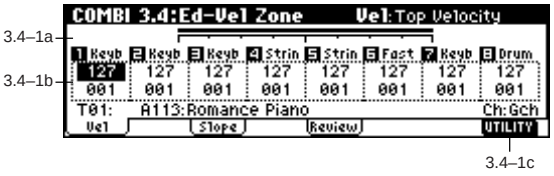
☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

COMBI 3.4: Ed–Vel Zone

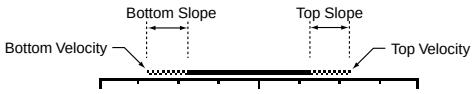
(Velocity Zone)

Sets the Top / Bottom Velocity parameters to specify the range of velocities that will sound each **timbre 1–8**, and sets the Top / Bottom Slope parameters to specify the range over which the volume will change.
By setting two or more timbres to velocity zones that do not overlap, you can use variations in playing dynamics to play different sounds (**Velocity Switch**).
If you set two or more timbres to velocity zones that overlap, the sounds will be heard together (**Layer**).
If the slope ranges (gray line) overlap, different sounds will be sounded together, and your playing dynamics will determine the proportion of each sound (**Velocity Cross-fade**).

3.4–1: Vel (Velocity Zone)



3.4–1a: Velocity Zone Map (1)



This displays the range of velocities that will sound the currently selected timbre. The range of velocities sounded is shown as a line, and the slope portion is shaded.

3.4–1b: Top Velocity, Bottom Velocity

Top Velocity **[1…127]**

Specifies the maximum velocity value that each timbre 1–8 will sound.

Bottom Velocity **[1…127]**

Specifies the minimum velocity value that each timbre 1–8 will sound.

note You can also set this parameter by holding down the [ENTER] key and playing a note.

It is not possible to set the bottom velocity greater than the top velocity for the same timbre. Nor can the top slope and the bottom slope overlap.

■ 3.4–1c: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

3.4–2: Slope (Velocity Slope)

3.4–2a: Top Slope, Bottom Slope

Top Slope **[0…120]**

Specifies the number of velocity steps over which the original volume will be reached, starting from the Top Velocity.

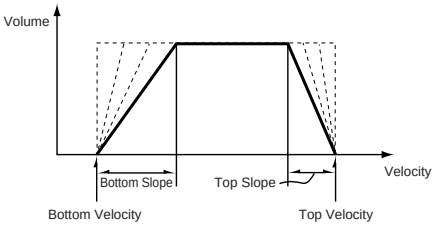
0: The volume will be at the original value from the top velocity.
120: The volume will decrease as the velocity approaches the top velocity.

Bottom Slope **[0…120]**

Specifies the number of velocity steps over which the original volume will be reached, starting from the Bottom Velocity.

0: The volume will be at the original value from the bottom velocity.
120: The volume will decrease as the velocity approaches the bottom velocity.

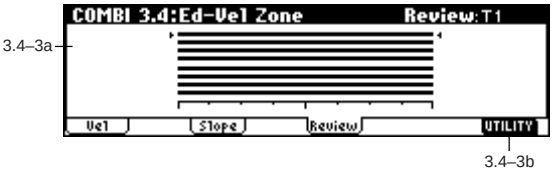
How volume will change according to key position



■ 3.4–2b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

3.4–3: Review



3.4–3a: Velocity Zone Map (All)

T1…T8

Displays the range of velocities that each timbre will respond to.
The range of velocities sounded is shown as a line, and the slope portion is shaded.

■ 3.4–3b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

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COMBI 4.1: Ed–MIDI Filter1

These settings allow you to apply filters to the MIDI data that will be transmitted and received by each timbre 1–8. For example even if two timbres are being played by the same MIDI channel, you can make settings so that the damper pedal will apply to one but not the other.

On (checked): Transmission and reception of MIDI data is enabled.
When "Status" (3.1–1a) is **INT**, operations of the built-in controllers or incoming MIDI data will apply the effect of the checked item to the program of the corresponding timbre. (The effect dynamic modulation function is not affected by this setting.)
When "Status" is **EXT** or **EX2**, operations of the built-in controllers will transmit MIDI data on the channel of that timbre. MIDI transmission and reception settings for this instrument are made in "MIDI Filter" (GLOBAL 2.1–1b).
The MIDI Filter 3 and MIDI Filter 4 pages contain MIDI filters for assignable controllers (whose function can be set by the user), and if these are assigned to MIDI control changes, the filter settings will affect those control changes.

In this case, if the assignable controllers have been set to control changes that are also found in the MIDI Filter 1 or MIDI Filter 2 pages, the settings in the MIDI Filter 1 and MIDI Filter 2 pages will take priority. Also, if the same control change is assigned to two or more controllers in the MIDI Filter 3 and MIDI Filter 4 pages, checking any one of them will enable that control change.

Off (unchecked): Transmission and reception of MIDI data is disabled.

4.1–1: MIDI 1–1 (MIDI Filter 1–1)

4.1–1a

4.1–1b

4.1–1a: Program Change, After Touch

Program Change **[Off, On]**

Specifies whether or not MIDI program change messages will be transmitted and received.

After Touch **[Off, On]**

Specify whether or not MIDI after touch messages will be transmitted and received.

■ 4.1–1b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

4.1–2: MIDI 1–2 (MIDI Filter 1–2)

4.1–2a

4.1–2b

4.1–2a: Damper CC#64, Portamento SW CC#65

Damper CC#64 **[Off, On]**

Specifies whether or not MIDI control change message #64 hold (damper pedal) messages will be transmitted and received.

Portamento SW CC#65 **[Off, On]**

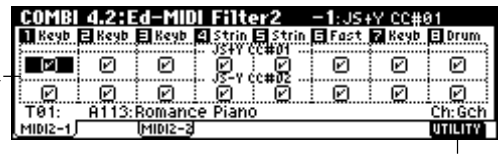
Specifies whether or not MIDI control change message #65 portamento on / off messages will be transmitted and received.

■ 4.1–2b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

COMBI 4.2: Ed–MIDI Filter2

4.2–1: MIDI 2–1 (MIDI Filter 2–1)



4.2–1a

4.2–1b

4.2–1a: JS+Y CC#01, JS–Y CC#02

JS+Y CC#01 **[Off, On]**

Specifies whether or not MIDI control change #1 (the +Y axis of this instrument's joystick, or specified as the "B" assignment of a REALTIME CONTROL knob) will be transmitted or received.

JS–Y CC#02 **[Off, On]**

Specifies whether or not MIDI control change #2 (the –Y axis of this instrument's joystick, or specified as the "B" assignment of a REALTIME CONTROL knob) will be transmitted or received.

■ 4.2–1b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

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4.2–2: MIDI 2–2 (MIDI Filter 2–2)

4.2–2a

4.2–2b

4.2–2a: JS X/Bend as AMS, Ribbon CC#16

JS X/Bend as AMS **[Off, On]**

Specifies whether or not MIDI pitch bend messages (the X axis of this instrument's joystick) will be received to control the AMS (☞p.212 "Alternate Modulation Source") effect assigned to **JS X**. (This is not a filter for MIDI pitch bend message reception.)

Ribbon CC#16 **[Off, On]**

Specifies whether MIDI control change message #16 (selected as assignment B for REALTIME CONTROLS [1]–[4] knobs, or assigned to the ribbon controller of a TRITON etc.) will be transmitted or received.

■ 4.2–2b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

COMBI 4.3: Ed–MIDI Filter3

Specifies whether the A- and B-mode effects of REALTIME CONTROLS knobs [1], [2], [3], and [4] will be transmitted and received. The A-mode of each knob is fixed as a MIDI control change message. For B-mode, you can assign a MIDI control change message in 2.2: Ed-Ctrl.

4.3–1: MIDI 3–1 (MIDI Filter 3–1)

4.3–2: MIDI 3–2 (MIDI Filter 3–2)

4.3–1a

4.3–1b

4.3–1a: Real-time Control Knob 1, 2

Knob1 **[Off, On]**

Specifies whether MIDI control change message #74 (internal low pass filter cutoff frequency) for the A-mode of knob [1] and the MIDI control change message assigned to the B-mode of knob [1] will be transmitted and received.

Knob2 **[Off, On]**

Specifies whether MIDI control change message #71 (internal low pass filter resonance or high pass filter cutoff frequency) for the A-mode of knob [2] and the MIDI control change message assigned to the B-mode of knob [2] will be transmitted and received.

4.3–2a: Real-time Control Knob 3, 4

Knob3 **[Off, On]**

Specifies whether MIDI control change message #79 (internal filter EG intensity) for the A-mode of knob [3] and the MIDI control change message assigned to the B-mode of knob [3] will be transmitted and received.

Knob4 **[Off, On]**

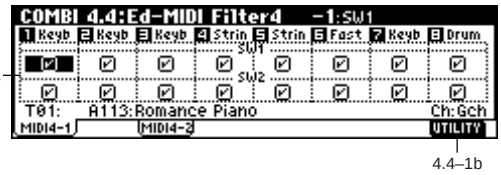
Specifies whether MIDI control change message #72 (internal filter and amp EG release time) for the A-mode of knob [4] and the MIDI control change message assigned to the B-mode of knob [4] will be transmitted and received.

■ 4.3–1(2)b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

COMBI 4.4: Ed–MIDI Filter4

4.4–1: MIDI 4–1 (MIDI Filter 4–1)



4.4–1a

4.4–1b

4.4–1a: SW1, SW2

SW1, SW2 **[Off, On]**

Specifies whether or not the effect of the [SW1] key and [SW2] key will be transmitted and received.
[SW1] key and [SW2] key correspond to the control change messages specified in 2.2: Ed-Ctrl.
This filter setting is valid for settings of SW1 Mod.(CC#80), SW2 Mod.(CC#81), or Porta.SW(CC#65).

■ 4.4–1b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

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4.4–2: MIDI 4–2 (MIDI Filter 4–2)

4.4–2a: Foot Pedal / Switch, Other Control Change

FootPedal / Switch **[Off, On]**

Specifies whether or not the effect of the ASSIGNABLE PEDAL / SWITCH will be transmitted and received. The function is assigned in GLOBAL 1.1–3a: System Foot page. This filter setting is valid when a MIDI control change is assigned.

Other Ctrl Change **[Off, On]**

Specifies whether or not MIDI control change message not covered in the preceding items MIDI Filter 1–4 will be transmitted and received.

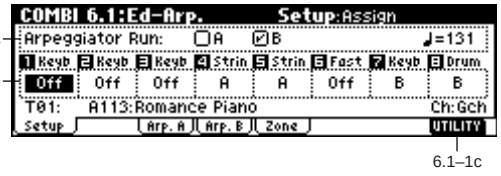
■ 4.4–2b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

COMBI 6.1: Ed–Arp. (Arpeggiator)

These parameters specify how the arpeggiator will function within the combination. Two arpeggiators can run simultaneously.
This offers a variety of possibilities, such as applying separate arpeggio patterns to two sounds that have been assigned as a keyboard split, or using velocity to switch between two arpeggio patterns.

6.1–1: Setup



6.1–1a: Arpeggiator Run, ♩ (Tempo)

Arpeggiator Run A, B (Run A, B)

When the [ARP ON / OFF] key is on, the arpeggiator(s) checked here will run if they are assigned to a timbre by "Assign" (6.1–1b). (☞1.1–4(5)a)

♩ (Tempo) **[040...240, EXT]**

Set the tempo of the arpeggiator. This can also be adjusted by the REALTIME CONTROLS C-mode [TEMPO] knob (☞1.1–1a)

6.1–1b: Assign

Assign **[Off, A, B]**

Assigns arpeggiator A or B to each timbre 1–8. When the [ARP ON / OFF] key is on, the arpeggiator specified for each timbre will operate according to "Arpeggiator Run" and these settings.

Off: The arpeggiator will not play this timbre.
A: This timbre will be played by Arpeggiator A. Make settings in the Arp. A page to select the arpeggio pattern and set parameters.
B: This timbre will be played by Arpeggiator B. Make settings in the Arp. B page to select the arpeggio pattern and set parameters.

MIDI If the "Status" (3.1–1a) of the timbre is **INT**, each timbre 1–8 to which arpeggiator A or B is assigned will be sounded by the note data generated by the arpeggiator, regardless of the "MIDI Channel" (3.1–1a) setting of the timbre. If a timbre is set to **EXT** or **EX2**, MIDI note data will be transmitted on the "MIDI Channel" of each timbre.

In this case, the arpeggiator can be triggered (operated) by any MIDI channel specified for the "MIDI Channel" parameter of any timbre 1–8 assigned to arpeggiator A or B.

If Local Control ("Local Control On," GLOBAL 2.1–1a) is Off, the keyboard will not trigger the arpeggiator. The arpeggiator will be triggered via MIDI IN. Turn Local Control OFF if you have recorded only the trigger notes on an external sequencer, and wish to playback the external sequencer to trigger the TRITON Le's arpeggiator.

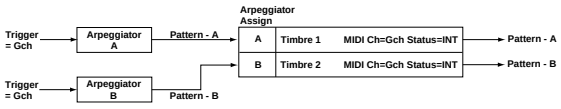
If you want the note data generated by the arpeggiator to be recorded on the external sequencer, turn the TRITON Le's Local Control ON, and turn off the echo back function on your external sequencer.

MIDI You can control the arpeggiator from an external sequencer, or use an external sequencer to record arpeggio note data. (☞p.239)

Example 1)

Set the "MIDI Channel" (3.1–1a) of timbres 1 and 2 to **Gch**, and set "Status" (3.1–1a) to **INT**. Assign arpeggiator A to timbre 1 and arpeggiator B to timbre 2, and check "Arpeggiator Run A, B" (1.1–4a / 5a, 6.1–1a).

- When the front panel [ARP ON / OFF] key is off, timbres 1 and 2 will sound simultaneously (layered) when you play the keyboard.
- When the front panel [ARP ON / OFF] key is turned on, timbre 1 will be played by arpeggiator A, and timbre 2 will be played by arpeggiator B.



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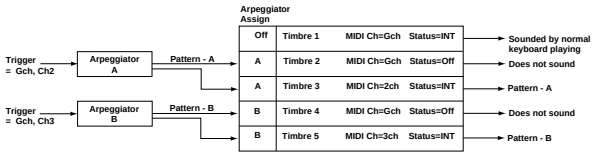
Example 2)

The “MIDI Channel” (3.1–1a) of timbres 1, 2, 3, 4, and 5 are set respectively to **Gch**, **Gch**, **02**, **Gch**, and **03**. Their “Status” (3.1–1a) is set respectively to **INT**, **Off**, **INT**, **Off**, and **INT**. Assign arpeggiator A to timbres 2 and 3, assign arpeggiator B to timbres 4 and 5, and check “Arpeggiator Run A, B” (1.1–4a / 5a, 6.1–1a).

- When the front panel [ARP ON / OFF] key is off, playing the keyboard will sound only timbre 1. (Timbres 2 and 4 are receiving the Gch, but they will not sound since their “Status” is Off.)
- When you turn on the front panel [ARP ON / OFF] key, arpeggiator A will operate for timbres 2 and 3, and arpeggiator B will operate independently for timbres 4 and 5. (Arpeggiators A and B are triggered by receiving note data on any MIDI channel of an assigned timbre, but in this example they are being triggered from the **Gch**.)
  When you play the keyboard, arpeggiator A will operate for timbres 2 and 3, but only timbre 3 whose “Status” is **INT** will sound. Similarly, arpeggiator B will operate for timbres 4 and 5, but only timbre 5 whose “Status” is **INT** will sound.
  In this way, you can make settings so that a timbre does not sound when the arpeggiator is off, but sounds only when the arpeggiator is on.



■ 6.1–1c: UTILITY

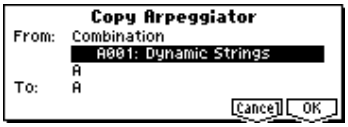
☞“Write Combination,” “Solo Selected Timbre” (1.1–1c)

For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

Copy Arpeggiator

This command copies arpeggiator settings.

① Select “Copy Arpeggiator” to access the dialog box.



② In “From” select the copy source (mode, bank, number) arpeggiator.
If you are copying from Combination, or Song, select either **A** or **B** to if you wish to copy settings from only one arpeggiator, or select **A&B** if you wish to copy the settings of both arpeggiators.

③ If you are copying from a Program, or are copying either A or B from Combination, or Song, select either A or B as the “To” copy destination.

④ To execute the Copy Arpeggiator command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

6.1–2: Arp. A (Arpeggiator A)

6.1–3: Arp. B (Arpeggiator B)

The Arp. A pages you make settings for arpeggiator A. The Arp. B pages you make settings for arpeggiator B.

note You can also use Utility “Copy Arpeggiator” (6.1–1c) to copy settings from another mode such as Program mode.

6.1–2(3)a: Arpeggiator-A(B) Setup

Pattern*	**[P000...P004, U000(INT)...U215(User)]**
Octave*	**[1, 2, 3, 4]**
Reso (Resolution)*	**[♪₃, ♪, ♪₃, ♪, ♩₃, ♩]**
Gate	**[000...100%, Step]**
Velocity	**[001...127, Key, Step]**
Swing	**[–100...+100%]**
Sort*	**[Off, On]**
Latch*	**[Off, On]**
Key Sync.*	**[Off, On]**
Keyboard*	**[Off, On]**

These parameters are the arpeggiator A settings for the combination.
(☞p.24 PROG 6.1: Ed–Arp.)

* These parameters can also be set in “1.1–4: Arp. A, 1.1–5: Arp. B”

6.1–2(3)b: ♩ (Tempo)

♩ (Tempo)	**[040...240, EXT]**

☞1.1–1a

■ 6.1–2(3)c: UTILITY

☞“Write Combination,” “Solo Selected Timbre” (1.1–1c), “Copy Arpeggiator” (6.1–1c)

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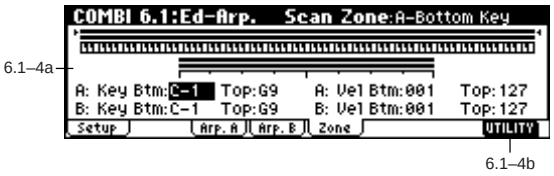
6.1–4: Zone (Scan Zone)

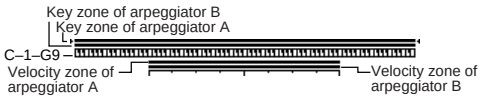
These settings specify the note and velocity ranges that will operate arpeggiators A and B.



6.1–4a: Scan Zone A/B

Zone Map

This shows the "Scan Zone" for each arpeggiator, A and B.



A: Key

Btm (A-Bottom Key) **[C–1...G9]**

Top (A-Top Key) **[C–1...G9]**

Specifies the range of notes (keys) that will operate arpeggiator A. "Top" specifies the upper limit, and "Btm" specifies the lower limit.

A: Vel (Velocity)

Btm (A-Bottom Velocity) **[001...127]**

Top (A-Top Velocity) **[001...127]**

Specifies the range of velocities that will operate arpeggiator A. "Top" specifies the upper limit, and "Btm" specifies the lower limit.

B: Key

Btm (B-Bottom Key) **[C–1...G9]**

Top (B-Top Key) **[C–1...G9]**

B: Vel (Velocity)

Btm (B-Bottom Velocity) **[001...127]**

Top (B-Top Velocity) **[001...127]**

Specify the range of notes (keys) and velocities that will operate arpeggiator B (☞"A: Key," "A: Vel").

note The values of these parameters can also be entered by playing a note on the keyboard while you hold down the [ENTER] key.

■ 6.1–4b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c), "Copy Arpeggiator" (6.1–1c)

COMBI 7.1: Ed–InsertFX

☞For details on insertion effects, refer to p.155 "7. Effect Guide."

7.1–1: BUS

7.1–1a: BUS Select, Send1(MFX1), Send2(MFX2)

Here you can specify the output bus for each timbre 1–8. You can also specify the send level to the master effects.

BUS Select **[DKit, L/R, IFX, 1, 2, 1/2, Off]**

Specifies the output bus for the program oscillator of each timbre 1–8. The current setting status can be viewed in the 7.1–2c: Routing Map.

DKit: This can be selected only if the program for which settings are being made is a drum program "Mode (Oscillator Mode) **Drums" (**PROG 2.1–1a). With a setting of **DKit**, the "BUS Select" (GLOBAL 5.1–3a) setting made for each key of the drum kit will be used.
For example if you have made "BUS Select" settings for each key of a drum kit so that the Snare sounds are sent to **IFX** and the other sounds are sent to **L/R**, selecting **Dkit** will send the Snare sounds to IFX and the other sounds to L/R. If you want to re-specify these routings, use Utility "DKit IFX Patch" (7.1–1b).

If this is set to **1/2**, the programs of timbres 1–8 will be sent in stereo from AUDIO OUTPUT (INDIVIDUAL) 1/2. If the pan of the program oscillator is controlled by MIDI control change #10 (pan) or AMS (Alternate Modulation Source), the sound will be output with the pan setting that is in effect at the moment of note-on. Unlike the case when this parameter is set to **L/R**, the pan of a sounding note will not change in real-time.
If you wish to move the pan of a sounding note in real-time and output it from AUDIO OUTPUT (INDIVIDUAL) 1/2, you must set "BUS Select" to **IFX**, select **00: No Effect** for "IFX" (7.1–2a), and then set "BUS Select" (7.1–2a) to **1/2**.

S1 (Send1(MFX1)) **[000...127]**

S2 (Send2(MFX2)) **[000...127]**

For each timbre 1–8, these parameters set the send level to master effects 1 and 2. These settings are valid when "BUS Select" is set to **L/R** or **Off**. When **IFX** is selected, the send levels to master effects 1 and 2 are set by the "S1 (Send1(MFX)), " "S2 (Send2(MFX))" parameters of the Setup page (7.1–2a), after the sound has passed through IFX.
If "BUS Select" is set to **1**, **2** or **1/2** these settings are ignored.

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MIDI Control change #93 can be used to control the Send 1 level, and #91 to control the Send 2, and modify their respective settings. These messages will be received on the MIDI channel specified for each timbre in the 3.1: Ed–Param1, MIDI page.
The actual send levels are determined by summing this value with the send level "S1 (Send1(MFX))," "S2 (Send2(MFX))" (PROG 7.1–2a) for each oscillator of the program selected for the timbre.

■ 7.1–1b: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Copy Insert Effect

☞PROG 7.1–1c
However, the MIDI control channel specified for "Control Channel" of the 7.1: Ed–InsertFX, Setup page will not be copied.

DKit IFX Patch (DrumKit IFX Patch)

This command changes the "BUS Select" settings for each key of the drum kit, so that connections to the IFX are temporarily changed to L/R. This can be executed only if the program specified for a timbre is a drum program, and the "BUS Select" (7.1–1a) setting is **DKit**, and the "BUS Select" (GLOBAL 5.1–3a) for each key of the drum kit is **IFX**.

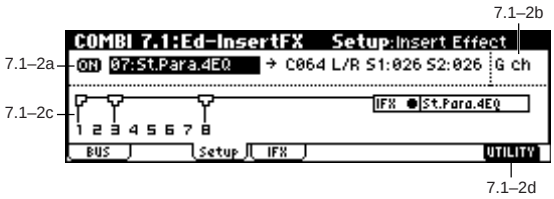
① Select "DKit IFX Patch" to access the dialog box.

② At the right of "DrumKit IFX→," select **L/R** as the patch destination.

③ To execute Drum Kit Insert Effect Patch, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.
To return the drum kit to its original state, execute IFX → **IFX**.

7.1–2: Setup

Here you can select the type of insert effect, turn it on/off etc.



7.1–2a: Ed-InsertFX Setup

IFX On/Off	**[Off, ON]**
Insert Effect	**[00...89: name]**
Pan(CC#8)	**[L000...C064...R127]**
BUS Select	**[L/R, 1, 2, 1/2, Off]**
S1 (Send1(MFX1))	**[000...127]**
S2 (Send2(MFX2))	**[000...127]**

These parameters are the same as in Program mode. (☞PROG 7.1–2)
However, dynamic modulation (Dmod) of the insert effect and the "Pan (CC#8), "Send1(MFX1)," and "Send2(MFX2)" that follow the insert effect will be controlled on the "Control Channel" (7.1–2b) MIDI channel, unlike in Program mode. The control changes used are the same as in Program mode.

7.1–2b: Control Channel

Control Channel **[Ch01...16, G ch, All Rt.]**

MIDI Specifies the MIDI channel on which dynamic modulation (Dmod) of the insert effect and the "Pan (CC#8), "Send1(MFX1)," and "Send2(MFX2)" that follow the insert effect will be controlled.

The channel number of the timbre routed through this IFX will be followed by a "*" displayed at the right of Ch01–16. If two or more timbres with different MIDI channel settings are routed through the IFX, this parameter specifies which of these channels will be used to control the effect.

G ch: The global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a) will be used to control the effect. Normally you will set this to **G ch**.
All Rt. (All Routed): The channel of any timbre routed through this effect can be used to control the effect. (Channels of each routed timbre will be indicated by "*".)

If "BUS Select" (7.1–1a) is set to **DKit** for a timbre for which a drums program is selected, the MIDI channel of that timbre will be valid only if this is set to **All Rt.**, regardless of the drum kit "BUS Select" setting (GLOBAL 5.1–3a) or the Utility "DrumKit IFX Patch" (7.1–1b) setting.

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7.1–2c: Routing Map, BUS Select

This displays the bus to which the programs used by timbres 1–8 will be sent.

Routing Map

This displays the insert effect settings. The routing, the specified effect name, and the on / off status are shown.

T01...8: BUS Sel [DKit, L/R, IFX, 1, 2, 1/2, Off]

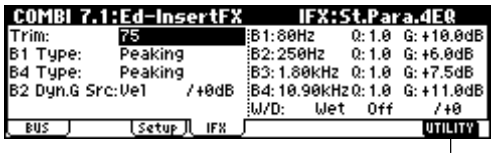
While viewing the map, you can specify the bus where each timbre 1–8 will be sent.
Use the cursor keys to select the timbre, and use the [INC] / [DEC] keys or the [VALUE] dial to set "BUS Select" (7.1–1a). These settings can also be made in "BUS Select" (7.1–1a).

■ 7.1–2d: UTILITY

☞"Write Combination," "Solo Selected Timbre" (1.1–1c), "Copy Insert Effect" (PROG 7.1–1c, 7.1–1b), "Dkit IFX Patch" (7.1–1b), "Select by Category" (PROG 7.1–2c)

7.1–3: IFX (Insert Effect)

Here you can adjust the parameters for the IFX that was selected in the Setup page (☞p.164–).



7.1–3a

■ 7.1–3a: UTILITY

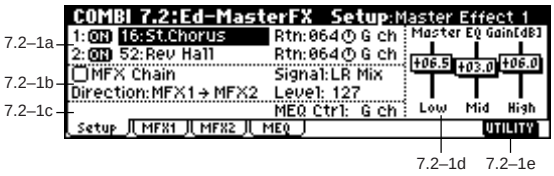
☞"Write Combination" (1.1–1c)

COMBI 7.2: Ed–MasterFX

☞For details on master effects, refer to p.155 "7. Effect Guide."

7.2–1: Setup

Here you can select the type of each master effect, turn it on / off, and make chain and master EQ settings.
With the exception of "MFX1 Control Ch," "MFX2 Control Ch," and "MEQ Control Ch," this is the same as in Program mode. (☞PROG 7.2: Ed-MasterFX)



7.2–1a: MasterFX Setup

MFX1 On / Off, MFX2 On / Off [Off, ON]
Master Effect 1, 2 [00...89: name]
Rtn 1, 2 (Return 1, 2) [000...127]

These are the same as in Program mode. Refer to "PROG 7.2–1: Setup." However, the master effects will be controlled on the "MFX 1, 2 Control Ch" MIDI channel, unlike in Program mode.
The control changes used are the same as in Program mode.

MFX 1, 2 Control Ch [Ch01...16, G ch]

MIDI Selects the MIDI channel that will control dynamic modulation (Dmod) for the master effects.

G ch: The global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a) will be used for control. Normally you will set this parameter to **G ch**.

7.2–1b: MasterFX Chain

MFX Chain [Off, On]
Direction (Chain Direction) [MFX1→MFX2, MFX2→MFX1]
Signal (Chain Signal) [LR Mix, L Only, R Only]
Level (Chain Level) [000...127]

These are the same as in Program mode. (☞PROG 7.2–1: Setup)

7.2–1c: MEQ Ctrl

MEQ Ctrl (MEQ Control Ch) [Ch01...16, G ch]

MIDI Selects the MIDI channel that will control dynamic modulation (Dmod) for the master EQ.

G ch: The global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a) will be used for control. Normally you will set this parameter to **G ch**.

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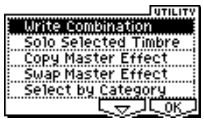
7.2–1d: Master EQ Gain [dB]

Low	**[–18.0...+18.0]**
Mid	**[–18.0...+18.0]**
High	**[–18.0...+18.0]**

These are the same as in Program mode. (☞PROG 7.2–1: Setup)

■ 7.2–1e: UTILITY



☞"Write Combination," "Solo Selected Timbre" (1.1–1c), "Select by Category" (PROG 7.2–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Copy Master Effect

☞p.28 PROG 7.2–1d
Note, the MIDI control channel that is specified by "MFX1, 2 Control Ch" (7.2–1a) will not be copied.

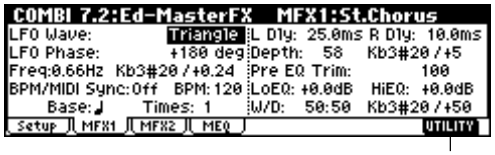
Swap Master Effect

☞p.29 PROG 7.2–1d
Note, the MIDI control channel that is specified by "MFX1, 2 Control Ch" (7.2–1a) will not be swapped.

7.2–2: MFX1 (Master Effect1)

7.2–3: MFX2 (Master Effect2)

Here you can set the parameters of the "Master Effect1" and "Master Effect2" effects that were selected in the Setup page (☞p.164–).



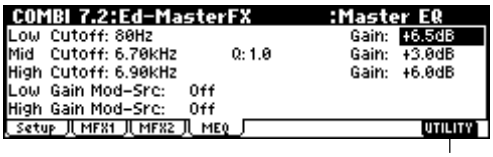
7.2–2a

■ 7.2–2(3)a: UTILITY

☞"Write Combination" (1.1–1c)

7.2–4: MEQ (Master EQ)

The master EQ is a three-band stereo EQ. It is located immediately before the AUDIO OUTPUT (MAIN OUT) L/MONO and R from the L/R bus, and adjusts the overall tonal character of the sound (☞p.209). The MEQ High Gain and the MEQ Low Gain can be controlled by assigning a modualtion source to the "Low Gain Mod-Src." and "High Gain Mod-src." functions on this page.



7.2–4a

■ 7.2–4a: UTILITY

☞"Write Combination" (1.1–1c)

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3. Sequencer mode

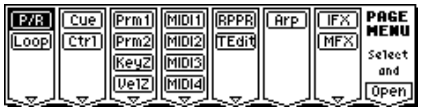
In Sequencer mode you can use the built-in 16-track sequencer to play, record and edit songs. You can also record and play patterns, make settings for the RPPR (Realtime Pattern Play Recording) function, play songs that use the arpeggiators, record patterns, and create Cue Lists to playback multiple songs consecutively.

note If the EXB-SMPL option (sold separately) is installed, executing the Sampling mode “Time Slice” command (SMPL 3.1–2e) will divide the sample and will at the same time create song performance data for these divided samples. You can then freely re-create the original rhythm loop in various ways; for example you can change the song tempo in Sequencer mode to play the rhythm loop at a different tempo without changing the pitch, or you can edit the sequence data to change the note numbers or timing.

These settings and any song data you have recorded are not backed up when the power is turned off. Before turning off the power, be sure to save important data on a SmartMedia or a data filer. Immediately after the power is turned on, memory will not contain any song data, so in order to playback the sequencer, you will need to load data from the SmartMedia, or receive a MIDI bulk data dump from an external MIDI sequencer (☞p.130).

SEQ PAGE MENU

For details on how to select pages in Sequencer mode, refer to p.1.



P/R	1.1: Play/REC	Make settings for song playback/recording, select a program for track, and make pan and level settings. (☞p.50)
Loop	1.2: Loop	Make settings for track play loop function. (☞p.57)
Cue	2.1: Cue List	Play, create, and make settings for cue lists. (☞p.58)
Ctrl	2.2: Controller	Controller settings. (☞p.61)
Prm1	3.1: Param1	MIDI, OSC, and pitch settings for each track. (☞p.62)
Prm2	3.2: Param2	Delay and scale settings for each track. (☞p.64)
KeyZ	3.3: Key Zone	Key zone settings for each track. (☞p.64)
VelZ	3.4: Vel Zone	Velocity zone settings for each track. (☞p.65)
MIDI1	4.1: MIDI Filter1	MIDI message transmission/reception filter settings for each track: Prog Change, After Touch etc. (☞p.66)
MIDI2	4.2: MIDI Filter2	Filter settings: JS, Ribbon Ctrl etc. (☞p.67)
MIDI3	4.3: MIDI Filter3	Filter settings: REALTIME CONTROL Knob (☞p.68)
MIDI4	4.4: MIDI Filter4	Filter settings: SW, Other Ctrl Change (☞p.68)
RPPR	5.1: RPPR	Pattern recording and editing. Pattern name settings. RPPR settings. (☞p.69)
TEdit	5.2: Track Edit	Edit track playback data. Specify track names. (☞p.73)
Arp	6.1: Arp.	Arpeggiator settings. (☞p.81)
IFX	7.1: Insert FX	Set BUS and master effect send level for each track. Insert effect routing, selection, and settings. (☞p.84)
MFX	7.2: Master FX	Master effect selection and settings. Master EQ settings. (☞p.85)

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SEQ 1.1: Play/REC

Here you can select a song, begin to create a new song, or make basic settings such as selecting the program used by each track.

1.1–1: Play.REC (Play/REC)

Here you can select a song, make settings for song playback/recording, and turn RPPR on/off.

1.1–1a: Location, Meter, Reso (Resolution), ♩ (Tempo), Tempo Mode

Location [001:01.000...999:16.191]

This display shows the current position in the song. From the left, the numbers are the measure, beat, and clock. When you modify these values, the current location will change.

MIDI When "MIDI Clock" (GLOBAL 2.1–1a) is **Internal**, changing the location will cause Song Position Pointer messages to be transmitted. If this parameter is set to **External**, Song Position Pointer messages from the specified source will change the location.

The range in which the beat and clock can be modified will depend on the currently specified time signature.

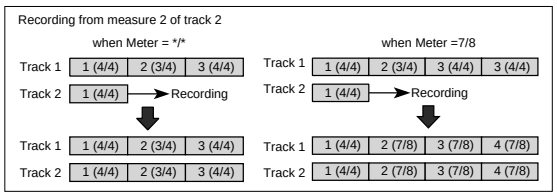
Meter [*/*, 1/4...16/16]

This is the time signature at the current location of the song. The time signature can be changed at each measure.

***/*:** This will be displayed when you press the [REC/WRITE] key. Specify this when you wish to use the time signature that is already recorded for that measure, and wish to record without changing the time signature.

1/4–16/4, 1/8–16/8, 1/16–16/16: This is the time signature at the current location of the song. After pressing the front panel [REC/WRITE] key, specify the time signature here. Then press the [START/STOP] key to begin recording, and the specified time signature will be recorded on the **Master Track** and on previously-recorded tracks. Be aware that if you press the [START/STOP] key during the pre-count to stop recording, the time signature will not be recorded.

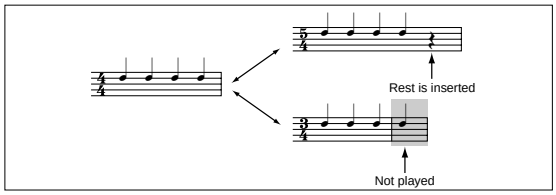
Normally, you will specify the time signature when you record the first track, and select ***/*** when recording subsequent tracks.



Changing the time signature in the middle of a measure

If you know beforehand the location at which you wish to change time signatures in the middle of a measure, use "Insert Measure" (5.2–1b) to specify and insert the time signature for each measure of the same time signature, and then record your musical data. Alternatively, if you wish to change the time signature in the middle of a song which already contains musical data, use "Track Select" (1.1–1c) to specify the **Master Track** (or any **Track01–16** which contains data), and use "Event Edit" (5.2–1b) to modify the time signature of the Bar event.

If the number of beats in a measure increases when you modify the time signature, rests will be inserted in the portion that was added. Conversely if the number of beats decreases, that portion will not be played. However if you return to the original time signature, the data that had been hidden will once again be played.

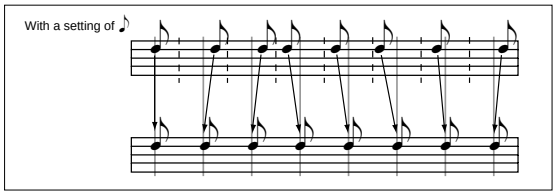


Reso (Real-time Quantize Resolution) [Hi, 𝅘𝅥𝅯₃...♩]

This corrects the timing of data as it is recorded in real-time. (It does not affect previously-recorded data.)

Hi (High Resolution): Timing will not be corrected. Data will be recorded at the maximum resolution (♩/192).

𝅘𝅥𝅯₃ – ♩: Data will be corrected to the nearest interval of the specified timing as it is recorded. For example if you select 𝅘𝅥𝅯₃, data will be corrected to the nearest 32nd note triplet interval. If you select ♩, data will be corrected to the nearest quarter note interval.



Since all of the musical data that is recorded into the sequencer will be corrected to the specified timing resolution, coarse settings of this parameter will cause continuous controllers such as pitch bend to be recorded in "stairstep" fashion.

In such cases, use a setting of **Hi** to record, and then use "Quantize" (5.2–1b) to correct only the desired type of data (notes etc.). It is best to avoid recording at a stiff resolution to begin with.

♩ (Tempo) [040…240, EXT]

This sets the playback tempo of the song and the tempo of the arpeggiator.

040...240: When the "Tempo Mode" is **Manu**, this tempo will be used for recording and playback. When "Tempo Mode" is **REC**, this tempo will be recorded on the master track.
EXT: This will appear when "MIDI Clock" (GLOBAL 2.1–1a) is **External**. The tempo of the internal sequencer will synchronize with the MIDI Clock messages received from an external sequencer etc. When "MIDI Clock" is **Internal**, the above tempo setting (040...240) will be used.

MIDI If **Tempo** is selected as an alternate modulation source, ♩ = 120 will be the base value.

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Tempo Mode [Auto, Manu, REC]

Auto: The tempo will follow the tempo of the **Master Track**. The tempo of the master track can be specified by using "Event Edit" (5.2–1b) with Master Track chosen in "Track Select," (1.1–1c) or by the **REC** operation described below.
When **Auto** is selected, it will not be possible to modify the "♩(Tempo)" setting while a song is playing or recording (or during standby).
Manu (Manual): The "♩(Tempo)" setting will be used.
REC: Tempo changes will be recorded on the Master Track. This can be selected if you set "Track Select" (1.1–1c) to **T01–T016** and press the [REC / WRITE] key to enter Recording Standby mode.
Start recording and adjust the "♩" (Tempo)" value, or use the REALTIME CONTROLS C-mode [TEMPO] knob to adjust the tempo.
This cannot be selected when the 1.1–6: Preferences page item "REC Setup" is set to **Loop All Tracks**.
Tempo changes can also be created using "Event Edit" (5.2–1b) or "Create / Ers. Ctrl" (5.2–1b).

note If you wish to record only the tempo changes, set "REC Setup" (1.1–6a) to **OverDub**, and the tempo will be recorded on the master track without being affected by the musical data of "Track Select."

1.1–1b: Song Select

Song Select [000...199: name]

Indicates the song that you wish to record or play.
If you wish to create a new song, you can either select a number from the popup menu for which the song name is blank, or use the numeric keys [0]–[9] to directly specify the song number, then press the [ENTER] key to access the dialog box, and finally press the [F8] ("OK") key.

note If you wish to change the length of the song after creating it, execute "Set Song Length" (☞p.81, 5.2–1b). When you create a new song, you may wish to set it somewhat longer than you expect to need; then when you are finished recording and editing, you can use "Set Song Length" to specify the correct length.

MIDI If "MIDI Clock" (GLOBAL 2.1–1a) is **Internal**, changing the song will cause Song Select and Song Position Pointer messages to be transmitted. If "MIDI Clock" is **External**, Song Select messages can be received from the specified source to change songs. When the song changes, tracks whose track status ("Status" (3.1–1a)) is **EXT**, **EX2** or **BTH** will transmit Bank Select, Program Change, Volume, Panpot, Poramento, Send1, 2, Post IFX Pan, and Post IFX send 1, 2 messages on the MIDI channel of the respective track.

1.1–1c: RPPR (Real-time Pattern Play / Rec), Track Select, Selected Track Information

RPPR [Off, On]

This turns the RPPR (Real-time Pattern Play / Recording) function on / off. RPPR lets you assign a pattern to each note of the keyboard, so that the pattern will playback (or be recorded) when you press the appropriate key.

On (checked): The RPPR function will be on. If a pattern has been assigned to each key in the 5.1–2: RPPR Setup page, pressing that key will perform the assigned pattern (☞5.1–2: RPPR Setup).

Track Select [T01...T16: name, Master Track]

T01–T16: Select the track(s) that will record or play song data.
The track name can be specified using the "Rename Track" (5.1–1c) procedure.
When you perform real-time recording on a single track, the musical data will be recorded on the track you select here.
When you perform real-time recording on two or more tracks simultaneously (☞"Multi REC" 1.1–6a), the "PLAY / MUTE / REC" (1.1–2(3)b) will select the recording track, regardless of the setting you make here.
Master Track: Select the master track when you wish to use the 5.2–1: Track Edit page menu commands to edit the tempo track. When using real-time recording or step recording, it is not possible to record the master track alone.

MIDI When you play the keyboard of this instrument and operate its controllers, the internal tone generator will sound according to the settings (program, level etc.) of the tracks that are selected here (if "Status" 3.1–1a is **INT** or **BTH**), and other tracks whose MIDI channels match will also sound at the same time (if "Status" is **INT** or **BTH**). Messages will also be transmitted on the MIDI channels of these tracks (whose "Status" is **EXT**, **EX2** or **BTH**).

Selected Track Information

This shows information on the "Track Select" that is currently selected for editing.

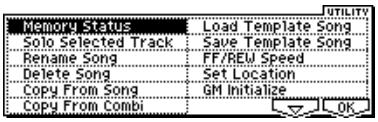
T (Track) No.: Bank No.: Prog No. and name

This displays the track number, and the bank, number, and name of the program selected for that track.

Ch 01...16

This shows the MIDI channel number specified for the track.

■ 1.1–1d: UTILITY



For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Memory Status

This displays the remaining amount of sequencer memory.

Solo Selected Track

The Solo function will alternate on / off each time you select this command.
When **checked**, the Solo function will be turned on, and only the currently selected track will sound. Other tracks will be muted. To solo another track, select a parameter of the desired track. "Selected Track Information" (1.1–1c) will indicate [Solo].
To defeat the Solo function, select the "Solo Selected Track" page menu command once again.

Even if multiple "SOLO On / Off" (1.1–2(3)b) settings are **On**, turning on the Solo function here and selecting "SOLO On / Off" or the parameter of another track will cause only that track to be soloed and sounded.

note If any tracks that have been muted by the Solo function have a "Status" (3.1–1a) setting of **EXT**, **EX2**, or **BTH**, the MIDI note-on / off messages of that track will not be transmitted.

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Rename Song

Here you can rename the selected song. A name of up to sixteen characters can be input. (☞BG p.43)

Delete Song

This command deletes the currently selected song.

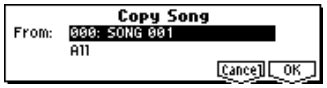
① Select “Delete Song” to access the dialog box.

② If you wish to execute the Delete Song command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. When you execute this command, the musical data, setting data, and patterns etc. of the currently selected song will be erased, and the memory area allocated to that song will be freed.

Copy From Song

Copies all settings and musical data from the song you specify to the currently selected song.

① Select “Copy From Song” to access the dialog box.



② In “From,” select the copy source song number.

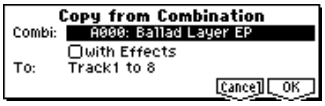
③ Select the data that will be copied.
All: Copy all musical data (e.g., track events and patterns) and settings.
Without Track/Pattern Events: Only song settings other than Play Loop and RPPR will be copied.

④ To execute Copy Song, press [F8] (“OK”) key. To cancel without executing, press [F7] (“Cancel”) key.
If you execute **All**, all musical data and settings of the currently selected song will be erased, and replaced by the copy source data.
If you execute **Without Track/Pattern Events**, song settings other than Play Loop and RPPR will be erased, and replaced by the copy source data.

Copy From Combi (Copy From Combination)

Copies the settings of the combination you specify to the settings of the currently selected song.

① Select “Copy From Combi” to access the dialog box.



② In “Combi,” select the copy source combination.

③ Check or uncheck “with Effects” to specify whether effect and EQ settings will also be copied.

If this is **checked**, the insert effect, master effect, and master EQ settings will also be copied.

④ In “To,” select the copy destination tracks (1–8 or 9–16).

⑤ To execute the copy, press [F8] (“OK”) key. To cancel without executing, press [F7] (“Cancel”) key.
When you execute, the settings of the currently selected song will be erased, and replaced by the settings of the combination.

Load Template Song

This command loads a template song as a song.
The built-in sequencer contains sixteen different **preset template songs** (P00–15) that contain preset settings for programs and effects appropriate for various musical styles. You are also free to create your own favorite settings for programs, track parameters, and effects, and save them as one of sixteen **user template songs** (U00–15) (☞“Save as User Template Song”).

① Select “Load Template Song” to access the dialog box.

② In “From,” specify the template song that you wish to load.

③ If you **check** “Copy Pattern to Track too?,” the “Copy Pattern To Track” dialog box will appear automatically after “Load Template Song” has been executed.

Preset Template Song	Track No.: Name	Program	Corresponding Preset Pattern No.:Name
P00: Pop/Ballade	Track01: Drums	A020:Standard Kit 1	P00: Pop&Balad 1/Std ... P10: Pop(6/8) 3/Std
P01: Rock/Metal Rock	Track01: Drums	D020:Processed Kit	P11: Rock 1/Process ... P21: Rock11/Process
P02: R & B	Track01: Drums 1(Std 2)	B020:Standard Kit 2	P22: R&B 1/Std2 ... P27: R&B 6/Std2
	Track09: Drums 2(Std)	A020:Standard Kit1	P28: R&B 7/Std ... P32: R&B11/Std
P03: Jazz	Track01: Drums	C020:Jazz/Brush Kits	P33: Jazz 1/Jazz ... P39: Jazz 7/Jazz
P04: Latin	Track01: Drums	C020:Jazz/Brush Kits	P40: Latin 1/Jazz ... P42: Latin 3/Jazz
			P46: Latin 7/Jazz ... P47: Latin 8/Jazz
	Track08: Percussion	C100:Percussion Kit	P43: Latin 4/Perc ... P45: Latin 6/Perc
P05: Reggae	Track01: Drums	B084:Drum'nBass Kit	P48: Reggae 1/D'n'B ... P53: Reggae 6/D'n'B
P06: Country	Track01: Drums	A020:Standard Kit 1	P54: Country 1/Std ... P57: Country 4/Std
P07: Folk	Track01: Drums	A020:Standard Kit 1	P58: Folk 1/Std ... P61: Folk 4/Std
P08: European Trad.	Track01: Drums	A020:Standard Kit 1	P62: E.Trad 1/Std ... P67: E.Trad(3/4)2/Std
	Track08: Percussion	C100:Percussion Kit	—
P09: Orchestral	Track01: Percussion	B100:Orchestra&Ethnic	—
P10: Techno/Euro Beat	Track01: Drums	C004:House Kit	P68: Techno 1/House ... P78: Techno11/House
P11: House	Track01: Drums	C004:House Kit	P79: House 1/House ... P92: House14/House
P12: Drum'n'Bass	Track01: Drums	B084:Drum'n'Bass Kit	P93: Drum'nBs 1/D'n'B ... P108: Drum'nBs16/D'n'B
P13: Acid Jazz	Track01: Drums	B020:Standard Kit 2	P109: AcidJazz 1/Std2 ... P120: AcidJazz12/Std2
P14: Hip Hop/Rap	Track01: Drums	B004:HipHop Kit	P121: HipHop 1/HipHop ... P135: HipHop15/HipHop
P15: Big Beats	Track01: Drums 1(Hip/Hop)	B004:HipHop Kit	P136: Bigbeat 1/HipHop ... P143: Bigbeat 8/HipHop
	Track09: Drums 2(Tricky)	A100:! {Tricky} Kit!	P144: Bigbeat 9/Tricky ... P149: Bigbeat14/Tricky

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If you execute **without checking** this, only the template song you specified in step ② will be loaded.

④ To load the template song, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key. When you execute, song settings other than Play Loop and RPPR will be copied.

If in step ③ you checked “Copy Pattern to Track too?” and pressed the [F8] (“OK”) key, the “Copy Pattern To Track” dialog box will appear.

This dialog box is the same as in 5.1: RPPR, Pattern page, utility menu command “Copy To Track” (☞p.71).

⑤ In “Pattern,” select the pattern that you wish to copy. If you press the [START / STOP] key, the selected pattern will play.
In To “Track,” select the copy destination track.
In “Measure,” specify the beginning measure of the copy destination.

note **Track 1** of all sixteen preset template songs contains a drum category program. (In preset template songs P02, P04, P08, and P15 drum category programs are specified for multiple tracks.)
The pattern names of the 150 preset patterns indicate the musical genre and part of the optimal drum category program. (☞The table in the previous page)

For example in **P00: Pop&Balad 1/Std**, the musical genre is “Pop&Balad 1,” and “Std” is part of the name of the drum category program that is most suitable. By loading the drum track for these preset template songs and the corresponding preset patterns, you can efficiently set up a drum track that is suited to each preset template song.

⑥ To execute, press the [F6] (“Copy”) key. When you execute, “Measure” will count up automatically. You may then copy patterns as well. To exit the command, press the [F7] (“Exit”) key.

(Example)

Load preset template song P00: Pop/Ballade together with preset pattern P01: Pop&Balad 2/Std into song S000.

① Select “Load Template Song” to access this dialog box.

② In “From,” select **P00: Pop/Ballade**.

③ Check “Copy Pattern to Track too?”

④ Press the [F8] (“OK”) key to access the “Copy Pattern To Track” dialog box.

⑤ Set “Pattern” to **Preset** to select preset patterns, and select one of the patterns **P00: Pop&Balad 1/Std–P07: Pop&Balad 8/Std** for the pattern name. (Preset template song **P00: Pop/Ballade** specifies program **A020: Standard Kit 1** for track 1.) If you wish to play the selected pattern, press the [START / STOP] key. If you wish to adjust the tempo, use the [TEMPO] knob.
For this example, select **P01: Pop&Balad 2/Std**.

⑥ Set To:”Track” to **01**, and “Measure” to **001**.

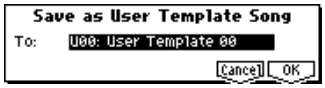
⑦ Press the [F6] (“Copy”) key once. The eight-measure preset pattern **P01: Pop&Balad 2/Std** has now been copied to the song. “Measure” will count-up automatically.

By repeating steps ⑤ and ⑦ you can continue to copy other patterns. When you press the [F7] (“Exit”) key, the dialog box will close.

Save Template Song (Save as User Template Song)

This command saves the program selections, track parameters, and effect settings etc. of the song as a user template song U00–15.

① Select “Save Template Song” to access the dialog box.



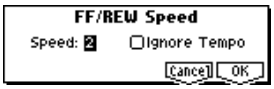
② In “To,” specify the user template song (U00–15) in which the data will be saved.

③ To save the template song, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
Be aware that when you execute this command, all setting data of the save destination User Template Song will be erased and rewritten.

FF / REW Speed

This allows you to set the speed at which fast-forward or rewind will occur when you press the [FF] key or [REW] key.

① Select “FF / REW Speed” to access the dialog box.



② In “Speed,” specify the speed (relative to the playback tempo) at which fast-forward and rewind will occur. With a setting of **2**, this will occur at double the playback tempo; with a setting of **3**, triple the tempo; and with a setting of **4**, quadruple the tempo. However in sections where the playback data is dense, the fast-forward or rewind speed may slow down.

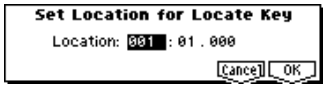
③ If “Ignore Tempo” is **checked**, the playback tempo and note length will be ignored, and fast-forward and rewind will be performed as fast as possible. The speed of fast-forward and rewind will differ between sections where the playback data is dense and sections where it is sparse. If this item is **unchecked**, fast-forward and rewind will be performed at the speed you specify for “Speed.”

④ To execute the settings, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Set Location (Set Location for Locate Key)

When you press the [LOCATE] key, you will move to the location specified here.

① Select “Set Location” to access the dialog box.



② In “Location,” specify the location to which you will move when you press the [LOCATE] key. If you specify **001:01:000**, you will move to the beginning of the song when you press the [LOCATE] key.

③ To execute the settings, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

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note Even when this dialog box is not opened, you can set this value to the current location by holding down the [ENTER] key and pressing the [LOCATE] key.

GM Initialize

This command transmits a GM System On message to Sequencer mode, resetting all tracks to the GM settings (refer to the table below).

MIDI In Sequencer mode when a GM System On message is received from an external device or the tone generator will be reset to the GM settings in the same way as when this command is executed (However even in these cases, the parameters of the 7.2: Master Fx will not be reset).

1.1–2: Prog...8 (Program T01...08)

1.1–3: Prog...16 (Program T09...16)

Here you can make basic settings such as selecting the program used by each track.

1.1–2(3)a: Program

Program Select
[A...D/000...127, G001...128, g001...g128:d]

Here you can select the program that will be used by each track.
When this parameter is selected, you can use the VALUE controller to make a selection. At this time, the BANK SELECT key LEDs will light to indicate the bank of the selected program.
The track number and the abbreviated category name of the selected program are displayed above “Program Select.”

note By holding down the [TIMBRE/TRACK] key and pressing a [F1](T1/T9)–[F8](T8/T16) key you can move to the corresponding track “T1”–“T16.”
The program bank can also be selected directly by using the BANK [A]–[GM] keys.

note When this parameter is selected, you can use the Utility menu command “Select by Category” to select a program by category. (☞p.2)

GM Initialize Parameters

	Parameter	Track1–9, 11–16	Track10	
1.1	Program Select	G001:Acoustic Piano	g001: (d): STANDARD Kit	
	Pan	C064	C064	
	Volume	100	100	
3.1	Status	–	–	The setting remains unchanged
3.2	Use Program’s Scale	–	–	The setting remains unchanged
6.1	Arpeggiator Assign	–	–	The setting remains unchanged
	Other Arpeggiator parameters	–	–	The setting remains unchanged
7.1	IFX/Indiv.Out BUS Select	L/R	DKit	
	Send1(MFX1)	0	0	
	Send2(MFX2)	40	40	
	IFX	–	–	The setting remains unchanged
	Pan(CC#8)	–	–	The setting remains unchanged
	BUS Select	–	–	The setting remains unchanged
	Send1	–	–	The setting remains unchanged
	Send2	–	–	The setting remains unchanged
	Other Insert Effect parameters	–	–	The setting remains unchanged
7.2	MFX1	–	–	16: St. Chorus
	MFX2	–	–	53: Rev Smth. Hall
	Return1	–	–	127
	Return2	–	–	050
	Other Master Effect and Master EQ parameters	–	–	Default settings

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The program you select here will be used when the song is played or recorded from the beginning. If the program is changed while recording, the program change will be recorded as musical data, and the program will change during playback. You can also change the program manually during playback. However if program change command is already recorded, the program will change at that point.

MIDI If the "Status" (3.1–1(2)a) is **INT** or **BTH**, the program can be specified by receiving a MIDI program change. When you switch songs or return to the beginning of the song, tracks whose "Status" is **EXT**, **EX2**, or **BTH** will transmit the bank and program number via MIDI. Tracks whose "Status" is **EX2** will display the Bank as "–," and will transmit via MIDI the bank number specified by "Bank (EX2) MSB" and "Bank (EX2) LSB" in the Param1 page (3.1–1(2)a).

1.1–2(3)b: PLAY / MUTE / REC, SOLO On / Off

PLAY / MUTE / REC **[PLAY, MUTE, REC]**

Specifies the mute status of each track, and select the recording tracks for multi-track recording. During playback or single track recording (normal recording), you can select **PLAY** or **MUTE** for tracks other than the recording track. During multi-track recording, each track can be set to **PLAY**, **MUTE**, or **REC**. Use the [INC][DEC] keys, or the [VALUE] dial to change the setting.

PLAY: The track will play.
MUTE: The track will be muted (silent).
REC: This will appear in single track recording (normal recording). It cannot be selected.
If you have selected multi-track recording (Preference page "Multi REC" on), select **REC** for the tracks that you wish to record.

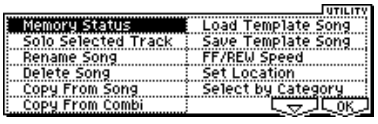
SOLO On / Off **[SOLO On, SOLO Off]**

Turn the Solo function on / off.
Select the box located at the right of "PLAY / MUTE / REC," and turn the setting on / off. A track for which this is turned **on** will show an "**S**" in the box, and only that track will sound. The other tracks will be muted.

MIDI In the case of tracks whose "Status" (3.1–1(2)a) is **BTH**, **EXT**, or **EX2**, a track that has been muted by the Mute or Solo functions will not transmit note on / off data on the MIDI channel specified for that track.

If the utility menu command "Solo Selected Track" (1.1–1d) is on, you cannot turn the solo mode off from here, its solo state will take priority. To turn the solo mode off in this case, you must use the utility menu command (1.1-1d) to deselect it. When you press "SOLO On / Off" or a parameter of another track, only that selected track will be soloed, and will be heard.

■ 1.1–2(3)c: UTILITY



☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Select by Category

Select the program for each track by category.
This will appear and can be selected when "Program Select" is selected. (☞PROG 1.1–1a)

1.1–4: Mix..8 (Mixer T01...08)

1.1–5: Mix..16 (Mixer T09...16)

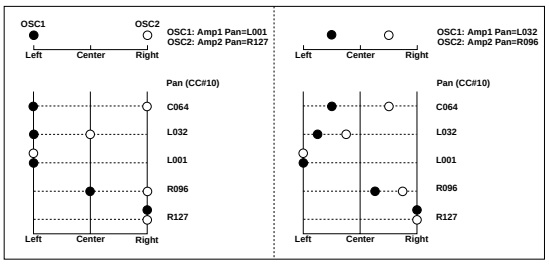
Here you can set the pan and volume of each track.
The pan and volume that you specify here will be used when you playback or record from the beginning of the song. If you change the settings during recording, the changes will be recorded as sequencer data, and pan and volume will change during playback. You can also change the settings during playback. However when the song reaches a location where pan or volume data was recorded, the settings will change as recorded.

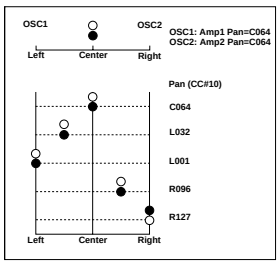
1.1–4(5)a: Pan, Volume

Pan (Panpot) **[RND, L001...C064...R127]**

Sets the pan of tracks 1–16.

L001...C064...R127: A setting of **L001** is far left, and **R127** is far right. A setting of **C064** will reproduce the pan setting of the oscillator in Program mode.





If a mono-type insertion effect is inserted, this setting will be ignored. In this case, the 7.1: Insert FX Setup page "Pan (CC#8)" setting will adjust the pan of the sound following the insertion effect. (☞p.158 "3. Mixer")

RND: The sound will be panned randomly at each note-on.

MIDI If "Status" (3.1–1(2)a) is **INT** or **BTH**, CC#10 Panpot can be received to control the panning. When receiving CC#10, a value of **0** or **1** is far left, **64** is center, and **127** is far right. When you change the song or return to the beginning of the song, tracks whose "Status" is **EXT**, **EX2** or **BTH** will transmit the pan you specify here as a MIDI message (except for **RND**).

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Volume **[000...127]**

Set the volume of tracks 1–16.

MIDI When "Status" (3.1–1(2)a) is **INT** or **BTH**, CC#7 Volume can be received to control the volume. The volume of a track is determined by multiplying the MIDI Volume (CC#7) and Expression (CC#11) values. When you change the song or return to the beginning of the song, tracks whose "Status" is **EXT**, **EX2** or **BTH** will transmit the volume you specify here as a MIDI Volume message.

■ 1.1–4(5)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

1.1–6: Pref. (Preference)

Here you can select the method of real-time recording, and set the metronome.

1.1–6a: Rec Setup, Metronome

Indicates the method of real-time recording.
Refer to BG p.64, 78 for the real-time recording.

REC Setup:

Recording Mode **[Over Write...Loop All Tracks]**

Over Write

When recording for the first time, you will normally select this method.
To begin recording, press the [REC / WRITE] key and then the [START / STOP] key. To stop recording, press the [START / STOP] key once again.
Be aware that when this method of recording is used to record on a track that already contains data, any previously existing data will be erased from the measure at which you begin recording and from all subsequent measures.

Over Dub

Select this when you wish to add data to a previously-recorded track.
To begin recording, press the [REC / WRITE] key and then the [START / STOP] key. To stop recording, press the [START / STOP] key once again.
Previously-recorded data will remain in the track, and the newly-recorded data will be added.

Manual Punch In

Select this method when you wish to use the [REC / WRITE] key or a foot switch to re-record selected portions of a previously-recorded track.
Press the [START / STOP] key to playback the song. When you reach the measure at which you wish to begin re-writing the data, press the [REC / WRITE] key or the foot switch, and recording will begin. When you are finished recording, press the [REC / WRITE] key or the foot switch once again, and recording will end.

Auto Punch In

Select this method when you wish to automatically re-record selected portions of a previously-recorded track.
If you select **Auto Punch In**, the display will indicate "M***–M*** (Auto P Start Meas–Auto P End Meas)" at the right, allowing you to specify the range of measures that will be rewritten.
Press the [REC / WRITE] key and then the [START / STOP] key, and playback will occur until the specified measure is reached. Then, recording will occur only over the specified area ("Auto P Start Meas–Auto P End Meas"), rewriting it with the newly recorded data.

Auto P Start Meas–Auto P End Meas
[M001...M999–M001...M999]

When "Recording Mode" is set to **Auto Punch In**, specify the measures at which recording will start and end.

Loop All Tracks

Select this method when you wish to repeatedly record a specified area of a track, and continue adding data. This is suitable for creating drum patterns, etc.
If you select **Loop All Tracks**, the display will indicate " M***–M*** (Loop Start Meas–Loop End Meas)" at the right, allowing you to specify the range of measures that will be recorded repeatedly.
Press the [REC / WRITE] key and then the [START / STOP] key, and playback will occur until the specified measure is reached. Then, recording will occur repeatedly over the specified area ("Loop Start Meas"–"Loop End Meas"). Previously-recorded data will remain, and the new data will be added. While recording, you can check "Remove Data" to delete unwanted data.

If you **check** "Multi REC," Loop All Tracks cannot be selected.

Loop Start Meas–Loop End Meas
[M001...M999–M001...M999]

When the "Recording Mode" is set to **Loop All Tracks**, you can specify the range of measures that will define the loop.

Remove Data **[Off, On]**

You can delete unwanted musical data while recording with **Loop All Tracks**.
This is available when **Loop All Tracks** is chosen in "Recording Mode."

On (checked): During recording, press the key (note number) that corresponds to the musical data you wish to delete. All occurrences of that note number will be deleted for the interval that you continue holding down the key.
Controller data can also be erased in a similar way. For example while you move and hold the joystick in the X (horizontal) direction, bender data will be erased. While you apply pressure to the keyboard, after touch data will be erased.

Also, you can press and hold down the [REC / WRITE] key to delete all musical data for as long as the key is held.

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Multi REC **[Off, On]**

On (checked): Multi-track recording mode will be selected. Check this when you wish to record multiple tracks simultaneously.
Use this when you want to record a keyboard performance using a Combi, or to realtime-record an arpeggiator performance on multiple tracks of differing channels.
If this is **checked**, the "PLAY / MUTE / REC" (1.1–2(3)b) setting of all tracks will be set to **REC**.
At this time, use the Program page (1.1–2(3)b) "PLAY / MUTE / REC" setting to specify the tracks on which multi-track recording will occur. (☞BG p.80)

The Multi REC setting also allows MIDI data on multiple channels to be received from a multi-track sequencer connected to this instrument, and recorded simultaneously on multiple tracks.
In this case, MIDI data of matching MIDI channels will be recorded on tracks whose "PLAY / MUTE / REC" (1.1–2(3)b) is set to **REC**, regardless of the "Track Select" (1.1–1c) setting.
When you do this, it is a good idea to set "MIDI Clock" (GLOBAL 2.1–1a) to **External** so that this instrument will synchronize to the external sequencer. However, tempo changes will not be recorded.
☞p.237 "Recording musical data from an external device"

Off (unchecked): Single track recording mode will be selected. Recording will occur on the track you select in "Track Select."

Metronome:

Here you can adjust the metronome settings.

Metronome Sound **[REC Only, REC / Play, Off]**

REC Only: The metronome will sound only during recording.
REC/Play: The metronome will sound during recording and playback.
Off: The metronome will not sound. However, the pre-count will sound before recording begins.
This parameter is linked to SEQ 5.1: RPPR Pattern "Metronome Sound" (5.1–1b).

Precount **[0...2]**

Specifies the pre-count that will occur before recording begins.
With a setting of **0**, recording will begin the instant you press the [START / STOP] key (after first pressing the [REC / WRITE] key).

Level **[000...127]**

Sets the volume of the metronome.

BUS (BUS Select) **[L / R, L, R, 1, 2, 1 / 2]**

Select the output destination of the metronome sound.

L/R, L, R: Output from OUTPUT (MAIN) L / MONO and / or R.
1, 2, 1/2: Output from OUTPUT (INDIVIDUAL) 1, 2, respectively.

■ 1.1–6b: UTILITY

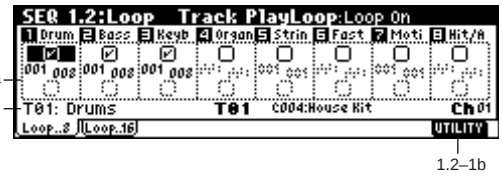
☞"Memory Status", "Solo Selected Track", "Rename Song", "Delete Song", "Copy From Song", "Copy From Combi", "Load Template Song", "Save Template Song", "FF / REW Speed", "Set Location," "GM Initialize" (1.1–1d)

SEQ 1.2: Loop

1.2–1: Loop...8 (Track Play Loop T01...08)

1.2–2: Loop...16 (Track Play Loop T09...16)

When playing / recording a song, you can independently loop the playback of tracks 1–16.



1.2–1(2)a: Track Play Loop

Loop On **[Off, On]**

Turn looping on / off for each track 1–16.

On (checked): That track will loop between "Loop Start Meas" and "Loop End Meas."

Loop Start Meas (Loop Start Measure) **[001...999]**

Specifies the first measure of the loop.

Loop End Meas (Loop End Measure) **[001...999]**

Specifies the last measure of the loop.

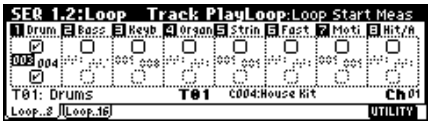
Play Intro **[Off, On]**

On (checked): After the measures before the specified "Loop Start Meas" are played once, the region of "Loop Start Meas" – "Loop End Meas" will be played repeatedly.
For example, you can use this on a drum track to make it play a fill-in and then begin looping.
Off (unchecked): Playback will begin from the "Loop Start Meas," and will begin looping immediately.

This will be valid if "Track Play Loop" is **checked** and "Loop Start Meas" is set to other than **001**.

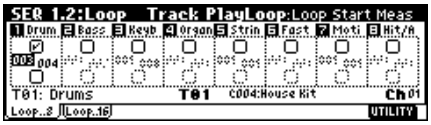
Example)

When "Play Intro" is **checked**



Track 1 will loop as follows.
M001–M002–M003–M004–M003–M004–M003–M004…

When "Play Intro" is **not checked**



Track 1 will loop as follows.
M003–M004–M003–M004–M003–M004–M003–M004...

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■ 1.2–1(2)b: UTILITY

☞“Memory Status,” “Solo Selected Track,” “Rename Song,” “Delete Song,” “Copy From Song,” “Copy From Combi,” “Load Template Song,” “Save Template Song,” “FF / REW Speed,” “Set Location” (1.1–1d)

SEQ 2.1: Cue List

2.1–1: Cue List

The cue list allows you to playback multiple songs in succession. You can specify a number of repetitions for each song. This instrument allows you to create twenty cue lists. In a single cue list you can freely connect up to 99 songs.
Each unit in a cue list is called a “step,” and you can specify a song number and a repeat (number of repetitions) for each step.
For example you could create each part of a song (intro, melody A, melody B, break, solo backing, ending etc.) as an individual song, and use a cue list to play the intro twice, melody A four times, melody B four times, the break twice, melody A four times ... etc. to produce the entire song. In cases when you wish to change the structure of the song, this Cue List function can help you work more efficiently.
The utility menu command “Convert to Song” (2.1–1e) lets you convert the songs in a cue list into a single song. For example you can use a cue list to create the backing, convert the cue list to a song, and then add solo phrases on unused tracks.

2.1–1a: Location, Meter, Cue List Select, Track Select, Selected Track Information, ♩ (Tempo), Tempo Mode

Location **[0001:01.000…9999:16.191]**

This displays the current location within the selected cue list. From the left, the numbers indicate the measure, beat, and clock.
The range of the beat and clock will depend on the time signature of the corresponding song.

MIDI When “MIDI Clock” (GLOBAL 2.1–1a) is **Internal**, changing the location within a cue list will cause Song Position Pointer messages to be transmitted. If “MIDI Clock” is **External**, this message can be received from the specified source to change the location within the cue list.
If the location exceeds the allowable data range of a Song Position Pointer message, it will not be transmitted.

Meter (Time Signature) **[1/4...16/16]**

This displays the time signature of the currently-playing song.

Cue List Select **[C00...C19: name]**

Indicates the cue list that you wish to play.
When using a cue list to play songs, you must first load the necessary data into internal memory, either from SmartMedia, or by a MIDI data dump from an external sequencer (☞p.129).

MIDI When “MIDI Clock” (GLOBAL 2.1–1a) is **Internal**, selecting a cue list in this page will cause a Song Select message (corresponding to the cue list number) and Song Position Pointer message to be transmitted. When “MIDI Clock” is **External**, a Song Select message from the specified source will switch cue lists.

Track Select **[T01...T16: name]**

Indicates the track that you wish to play manually from the keyboard along with the playback. While a cue list is playing, you can play along using the track settings and musical data of the song selected by the current “Step” (2.1–1c). The track you select here will also follow the track settings and musical data of the currently playing song. If you wish to continue using the same program to play along from the keyboard with consecutive songs, specify the same program for this track in the songs of each Step.

Selected Track Information

This area shows the program bank number, program number, and name of the track selected in “Track Select.”

♩(Tempo) **[040...240, EXT]**

Specifies the tempo at which the song in the cue list will be played (☞“1.1–1a: Tempo”).

Tempo Mode **[Auto, Manu]**

Auto: Playback will use the tempo specified by the currently playing song. During playback, the “♩(Tempo)” setting cannot be modified.
Manu (Manual): Tempo specified in the song will be ignored, and playback will use the tempo specified above for “♩(Tempo).”

2.1–1b: Step, Cue Edit-Song, Rep (Cue Edit-Repeat), FX (Cue Edit-Load FX)

Here you can create and edit a Cue List. When creating a new cue list, the cue list will show a default cue list of two “Steps,” consisting of “Step” **01** (S000: NEW SONG) and “Step” **02** (End).
To create or edit a cue list, press the [F7] (“EDIT”) key. If you now select a song for “Step” 01, that song will play once. If you set “Rep (Repeat)” to **02**, that song will play twice.
Press [F7] (“EDIT”), and with “Step” **01** selected, press the [F4] (“Insert”) key to insert a step.
For example with “Song” **S001** selected for “Step” **01**, set “Rep” to **02**, select “Song” **S002** for “Step” **02** and set “Rep” to **02**. When you press the [START / STOP] key, song 1 (S001) will be played twice, and then song 2 will be played twice. In this way, arrange the desired songs in the cue list and specify the number of times that each will be played.

Step [Measure] **[01...100 (M0001...M9999)]**

This shows the step number and its beginning measure. When playback is stopped, the step currently selected by “Step” (2.1–1c) will be a black triangle. When you use the [START / STOP] key to begin playback, it will begin from this step. While a cue list is playing, the playing step will be a black triangle.
“M**** (Measure)” shows the beginning measure of each step. It cannot be edited.

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Cue Edit-Song
[S000...S199: name, End, Continue to Step01]

This selects the song for the step. It cannot be selected during playback.
You can also select whether playback will end with the last step in the cue list, or whether playback will return to "Step" **01** and continue endlessly.
End: Playback will end.
Continue to Step01: Playback will return to "Step" **01**, and the cue list will continue playing endlessly. To stop, press the [START / STOP] key.

Rep (Cue Edit-Repeat) [01...64, FS]

Specifies the number of times that the song of this step will be repeated.
FS: A foot switch connected to the rear panel can be used to specify the point at which the song will stop repeating. When you press the foot switch, that repetition of the song will finish playing, and then playback will continue to the next step. Set "Foot Switch Assign" (GLOBAL 6.1–1a) to **Cue Repeat Control**.

FX (Cue Edit-Load FX) [Off, On]

Specifies whether the effect settings will also change simultaneously when the playback advances to the song of the next step.

On (checked): The effect settings will change to those of the newly selected song.
Off (unchecked): The effect settings will not change.

Depending on the effect settings, a certain amount of time may be required to switch effects. In this case, playback will not be smoothly connected from song to song.
If you want to transition smoothly from song to song, **check** "FX" in "Step" **01**. For the remaining steps, do **not check** "FX" With these settings, the effects will be set before playback begins, so there will be no time lag to interrupt the smooth transition between songs.
Although it is not possible to change the effect types in the middle of a cue list, you can use the dynamic modulation function or MIDI control changes (effect control) to apply reverb more deeply to certain songs, or raise the LFO speed for other songs, etc. When using a cue list to construct a song, we recommend this method.
When you execute the "Convert to Song" (2.1–1e) page menu command, the effect settings of the "Step" **01** song will be specified at the beginning of the song that is created by the conversion.

Even when "FX" is **not checked**, there may be a time lag in the transition from one song to the next, depending on the musical data in the song. There may also be cases in which the musical data at the transition between songs does not play at the correct timing. To fix this, you can edit the musical data of the song, or convert the cue list to a single song. If you use "Convert to Song" (2.1–1e) to convert the cue list to a song, there will be no time lag at the transition, and the musical data will play at the correct timing.

2.1–1c: Step (Current Step)

Step (Current Step) [01...100]

Indicates the step that will be inserted, cut or copied.
If you wish to playback from a step in the middle of the cue list, select the desired step here, and press the [START / STOP] key.

Last Step [Last: 001...100]

This will be displayed at the right of "Step" for the last step.

2.1–1d: EDIT / DONE, INSERT, CUT, COPY

EDIT / DONE ([F7])

Press this to create or edit a cue list. When you press this key, the display will change from "EDIT" to "DONE."
When you are finished creating or editing the cue list, press "DONE" (the [F7] key).

INSERT ([F4])

When you press the [F4] ("Insert") key, the step data that was temporarily saved in the buffer by the [F6] ("Copy") key or [F5] ("Cut") key will be inserted at the "Current Step." (If copy or cut has not been executed, default data will be inserted.)

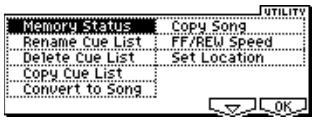
CUT ([F5])

When you press the [F5] ("Cut") key, the "Current Step" will be cut, and its data will be saved temporarily in the buffer. If you Insert immediately after you cut, the data will return the state in which it was before you cut.

COPY ([F6])

When you press the [F6] ("Copy") key, the data of the "Current Step" will be saved temporarily in the buffer.
Press the [F4] ("Insert") key to insert the copied step into the "Step."

■ 2.1–1e: UTILITY



☞"Memory Status," "FF / REW Speed," "Set Location" (1.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

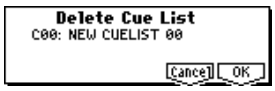
Rename Cue List

This command lets you rename the selected cue list.
In the "Rename Cue List" dialog box, press the [F5] ("Name") key, and enter the desired name.
You can input up to 16 characters. (☞BG p.43)

Delete Cue List

This command deletes the currently selected cue list.

① Select "Delete Cue List" to access the dialog box.



② To execute, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.
When you execute this command, the settings of the currently selected cue list will be deleted.

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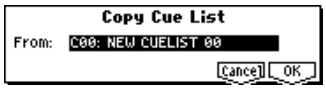
Copy Cue List

This command copies the settings of another cue list to the currently selected cue list.

① Select “Copy Cue List” to access the dialog box.



② In “From,” specify the copy source cue list.

③ To execute, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.
When you execute this command, the settings of the currently selected cue list will be deleted and rewritten by the copy source data.

Convert to Song (Convert Cue List to Song)

This command converts a cue list consisting of multiple songs to a single song. Although it is not possible to record additional tracks into a cue list, you can convert the cue list to a song, and then record solos etc. onto open tracks. Also, it will be necessary to convert a cue list to a song if you wish to write it to a SmartMedia as SMF data. During the conversion, the track and effect settings of the song specified for “Step” **01** will be copied to the beginning of the resulting song, and all track and effect settings of subsequent songs will use the settings of the song for “Step” **01**.

The “Convert to Song” command converts a cue list to a song as described below.

Song / Track parameters will use the settings of the “Step” 01 song.

The MIDI channel of each track will be according to the settings of the “Step” **01** song. If “Step” **02** and following songs have different settings, it may not be possible to convert the playback result of the cue list into a song. As far as possible, try to keep the MIDI channel assignments consistent between songs that you intend to use as part of a play list that will be converted into a song.

The following track parameters will not be reflected in the conversion. As with the MIDI channels, we recommend that you keep these settings consistent between all songs in the cue list.

SOLO On/Off, Status, MIDI Channel, Bank(EX2) LSB, Bank(EX2) MSB, Force OSC Mode, OSC Select, Delay, Use Programs Scale, Key Zone, Velocity Zone, MIDI Filter1–4

Converting Song / Track parameters into track events

Second and subsequent repetitions of the “Step” **01** song, and the settings of “Step” **02** and following songs will all be converted into track events (musical data). The following data will be converted.

Track1–16	Bank/Program, Pan, Volume, Portamento, Detune, Bend Range
Master Track	Tempo, Meter

If “Pan” (1.1–4(5)a) is **RND**, it will be converted to C064. If “Portamento” (3.1–3(4)a) is **PRG**, or if “Bend Range” (3.1–5(6)a) is **PRG** or a **negative value**, these will not be reflected in the conversion.

“Detune” (3.1–5(6)a) will be divided into RPN Fine Tuning and Coarse Tuning, and converted into events. For example if the “Detune” setting of **+600**, Fine Tuning will be **00** and Coarse Tuning will be **6**. Fine Tuning will modify the playback pitch (Detune). Coarse Tuning will change the notes that are played back (Transpose). For this reason with some programs such as drum programs, the playback result produced by a cue list may not be reproduced when the cue list is converted into a song.

Converting “Track Play Loop” (SEQ 1, 2: Loop, Track Play-loop page)

If “Loop On” is **on**, the area from “Loop Start Meas” to “Loop End Meas” will be expanded as far as the last measure in the master track.

Example)

If Track Play Loop is **M005–M008**, and the master track contains 10 measures, the data will be expanded from the beginning of the track as **M005**, **6**, **7**, **8**, **M005**, **6**, **7**, **8**, **M005**, **6**.

Converting patterns

Patterns in the “Step” **01** song will be copied as patterns of the converted song.
If there is a second or subsequent repeat for “Step” **01**, or if the tracks of “Step” **02** and subsequent songs contain patterns, they will be expanded into track events (musical data).

“Transpose” settings

If the “Transpose” (3.1–5(6)a) of the tracks in “Step” **02** and subsequent songs differ from the settings of the “Step” **01** song, the note numbers of the note data will be shifted.

Example)

If “Step” **01** “Transpose” = **+1** and “Step” **02** “Transpose” **–1**, the actual note numbers of the “Step” **02** track note data will be shifted downward by **2**.

If “Rep” is set to FS (Foot Switch), it will be converted as “Rep” 1.

When you execute “Convert to Song” to convert a cue list to a song, the repeat settings within the cue list and the pattern and track play loop settings of the songs used by the cue list will all be converted into events such as note data. For this reason, the amount of data will increase significantly, and in some cases there may not be enough internal memory to perform the conversion. In particular if the cue list uses long songs, or if numerous repeats have been specified, or if many patterns are used by the songs, you should try executing the “Convert to Song” command from time to time as you create the cue list, in order to verify the amount of memory that will be required for the conversion.

A cue list that is longer than 999 measures cannot be converted into a song.

① Select the cue list (C00–C19) that you wish to convert into a song.

② Select “Convert to Song” to access the dialog box.

③ In “To,” specify the song into which the cue list will be converted. If you select a new song, a dialog box will ask you for confirmation. Press the [F8] (“OK”) key to create a new song and convert the cue list to that song.

④ To execute the conversion, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
If you select an existing song that already contains settings and / or musical data, executing this command will erase the data of that song and rewrite it with the data that was converted from the cue list. Before you execute, be sure that you will not be losing important data.

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After executing this command, you can press the [COMPARE] key to return to the state before execution.

Copy Song

This command creates a song from a specified portion of a song in a cue list. For example if you have an eight-measure song and want to repeat measures 5–8, you can use this command to create a four-measure song from that portion. Then you can assign the resulting song to a step in a cue list, and repeat it.

① In "Step," select the desired step.

② Select "Copy Song" to access the dialog box.

③ In "From Measure," specify the first measure in the copy source song. In "To End of Meas," specify the last measure.

④ In "To," specify the song into which the data will be converted. If you select a new song, a dialog box will ask you for confirmation. Press the [F8] ("OK") key to create a new song and copy the data to that song. If you select an existing song that already contains settings and/or musical data, executing this command will erase the data of that song and rewrite it with the data from the copy source. Before you execute, be sure that you will not be losing important data.

⑤ If you check "Replace to original Song in Cue" and execute this command, the "Step" song will be replaced by the newly created song. If you execute without checking this box, the newly created song can be selected later for the desired step of the cue list.

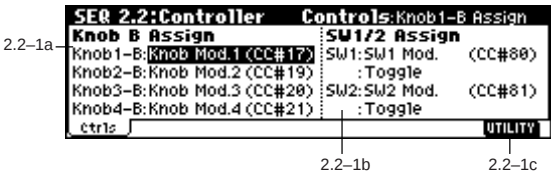
⑥ To execute the Copy Song operation, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

SEQ 2.2: Controller

2.2–1: Ctrls (Controls)

Here you can set the B-mode functions that the REALTIME CONTROL knobs [1]–[4] and the [SW1] key, [SW2] key, will have in Sequencer mode.

MIDI When these switches or knobs are operated during recording, the MIDI messages that you assign here will be recorded.



2.2–1b: Knob B Assign

Here you can set the B-mode functions (mainly various control changes) that the front panel REALTIME CONTROL knobs [1]–[4] will have in Sequencer mode (☞p.221 "Realtime Control Knobs B Assign List"). The functions you specify here will operate when you rotate the front panel REALTIME CONTROL knobs [1]–[4] in B-mode.
Since the functions assigned to these knobs by the program of each track will not be valid, you can make new assignments here.

Knob1-B (Knob1-B Assign) AMSource **[Off...MIDI CC#95]**
Knob2-B (Knob2-B Assign) AMSource **[Off...MIDI CC#95]**
Knob3-B (Knob3-B Assign) AMSource **[Off...MIDI CC#95]**
Knob4-B (Knob4-B Assign) AMSource **[Off...MIDI CC#95]**

☞"Knob B Assign" (PROG 2.2–1a).

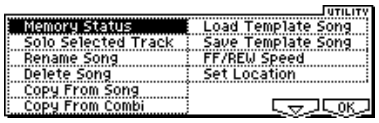
2.2–1b: SW1/2 Assign

Here you can assign functions to the front panel [SW1] and [SW2] keys (☞p.220 "SW1, SW2 Assign List").
Since the functions assigned to these switches and knobs by the program of each track will not be valid, you can make new assignments here.

SW1 (SW1 Assign) AMSource **[Off, ..., AfterT Lock]**
SW1 Mode **[Toggle, Momentary]**
SW2 (SW2 Assign) AMSource **[Off, ..., AfterT Lock]**
SW2 Mode **[Toggle, Momentary]**

☞"SW 1/2 Assign" (PROG 2.2–1b).

2.2–1c: UTILITY



☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF/REW Speed," "Set Location" (1.1–1d)

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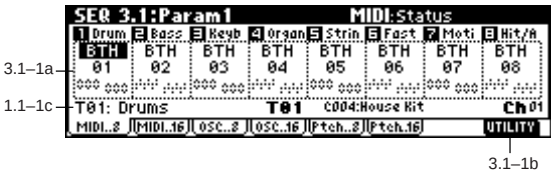
SEQ 3.1: Param1

3.1–1: MIDI..8 (MIDI T01...08)

3.1–2: MIDI..16 (MIDI T09...16)

Here you can make MIDI-related settings for each track.



3.1–1(2)a: Status, MIDI Channel, Bank(EX2) MSB / LSB

Status **[INT, Off, BTH, EXT, EX2]**

This sets the status of MIDI and the internal tone generator for each track.

INT: When the musical data recorded in the track is played back, or when you use "Track Select" (1.1–1c) to select a track that is set to **INT** and play the keyboard and operate the controllers, the internal tone generator of this instrument will sound, and MIDI data will not be transmitted to an external device.
Off: The program will not sound, nor will MIDI data be transmitted.
BTH: The operation of both **INT** and **EXT** will be performed. When the musical data recorded in the track is played back, or when you select a track that is set to **BTH** and play the keyboard and operate the controllers, the internal tone generator of this instrument will sound, and at the same time MIDI data will also be transmitted to an external device.
EXT: When the musical data recorded in the track is played back, or when you select a track that is set to **EXT** and play the keyboard and operate the controllers, MIDI data will be transmitted to an external device, but the internal tone generator of this instrument will not sound.
When you switch songs or reset to the beginning of the song, tracks that are set to **EXT** will transmit program change, volume, panpot, portamento, send 1, 2, post IFX pan, and post IFX send 1, 2 MIDI messages.
EX2: "Bank Select" will be enabled. Instead of the A–g: (d) bank numbers that can be selected on this instrument, the bank number you specify here will be transmitted. In other respects this is the same as **EXT**.

MIDI MIDI data is transmitted and received on the MIDI channel that is specified separately for each track by "MIDI Channel."

	Recorded data Keyboard and controller operations		Received data	
Status	Internal tone generator	MIDI OUT	Internal tone generator	MIDI OUT
INT	●	×	●	—
EXT, EX2	×	●	×	—
BTH	●	●	●	—

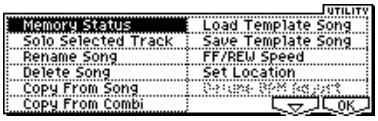
MIDI Channel **[01…16]**

Specifies the MIDI channel that the track will use to transmit and receive musical data. The MIDI channel you specify here will be the receive channel when "Status" is **INT**, the transmit channel when it is **EXT** or **EX2**, and the receive / transmit channel when it is **BTH**. Tracks set to **INT** which have the same MIDI channel will sound and be controlled identically when they receive MIDI data or data from the sequencer tracks.

Bank(EX2) MSB **[000...127]**
Bank(EX2) LSB **[000...127]**

When "Status" is set to **EX2**, this sets the bank number that will be transmitted. When "Status" is other than **EX2**, this setting has no effect.

3.1–1(2)b: UTILITY

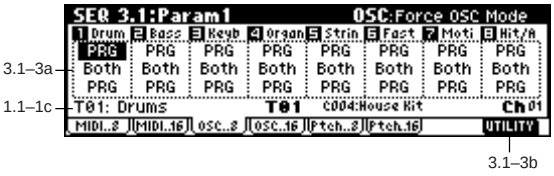


☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

3.1–3: OSC..8 (OSC T01...08)

3.1–4: OSC..16 (OSC T09...16)

These parameters specify how each track will be sounded.



3.1–3(4)a: Force OSC Mode, OSC Select, Portamento

Force OSC Mode **[PRG, Poly, Mono, LGT]**

Indicates the "Voice Assign Mode" (PROG 2.1–1b) of the program selected for each track 1–16 (☞COMBI 3.1–2a).

OSC Select **[Both, OSC1, OSC2]**

Specifies the "Oscillator Mode" (PROG 2.1–1a) of the program selected for each track 1–16. If the "Oscillator Mode" is **Double**, you can use this setting to make only one or the other oscillator sound (☞COMBI 3.1–2a).

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Portamento [PRG, Off, 001...127]

Specifies the portamento effect for each track 1–16 (☞COMBI 3.1–2a).

MIDI The portamento setting you make here will be used when the song is played or recorded from the beginning. If you change the setting while recording, it will be recorded as part of the musical data. (However if you set this to **PRG**, it will not be recorded.) You can change this setting during playback. However if you come to any Portamento On / Off data or Portamento Time data that was recorded, the settings will change to the recorded values.
When the track whose "Status" (3.1–1a) is **INT** or **BTH**, MIDI control change (CC) #05 (Portamento Time) and CC#65 (Portamento Switch) can be received to control this and change the setting. (If the setting is **PRG**, CC#05 Portamento Time will not be received.)
When you switch songs or return to the beginning of the song, tracks whose "Status" is **BTH**, **EXT**, or **EX2** will transmit this setting via MIDI. If this is **Off**, CC#65 with a value of 0 will be transmitted. If this is **001–127**, a CC#65 of 127 and CC#05 of 1–127 will be transmitted. If this is set to **PRG**, nothing will be transmitted.
This data is transmitted on the MIDI channel specified for each track by "MIDI Channel" (3.1–1a).

3.1–3(4)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

3.1–5: Ptch..8 (Pitch T01...08)

3.1–6: Ptch..16 (Pitch T09...16)

Here you can make pitch-related settings for each track.

3.1–5(6)a: Transpose, Detune, Bend Range

Transpose [–24...+24]

Adjusts the pitch of each track in semitone steps.
12 steps are one octave.

Detune (BPM Adj.) [–1200... +1200]

Adjusts the pitch of each track in one-cent steps from the normal pitch.

0: Normal pitch.

note You can use the "Detune BPM Adjust" (3.1–5(6)b) page menu command to make a calculation in BPM units and set Detune automatically.

MIDI "Transpose" and "Detune" settings do not affect the note data that is transmitted via MIDI. "Transpose" and "Detune" are controlled by received MIDI RPN messages. The "Oscillator Mode" (PROG 2.1–1a) of the programs selected for tracks 1–16 will be controlled as follows.

- If "Oscillator Mode" is **Single** or **Double**, MIDI RPN Coarse Tune messages can be received to control and change the "Transpose" setting, and Fine Tune messages to control and change the "Detune" setting.
- If "Oscillator Mode" is **Drums**, MIDI RPN Coarse Tune and Fine Tune messages can be received to control and change the "Detune" setting. The range of control will be ±1 octave when Coarse Tune and Fine Tune are added.

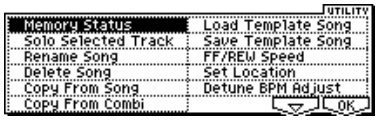
Bend Range [PRG, –24...+24]

Specifies the range of pitch change that will occur when the pitch bender is operated.

PRG: The pitch range specified by the program will be used.
–24–+24: Regardless of the setting of the program, pitch bending will use the range you specify here.

MIDI This setting can be controlled and changed by received MIDI RPN Pitch Bend Range messages. (These messages will not be received if the setting is **PRG**.)

3.1–5(6)b: UTILITY



☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Detune BPM Adjust

If the program of a track uses a phrase or rhythm loop multisample or sample created by adjusting the BPM in Sampling mode (if the separately sold EXB-SMPL option is installed) or loaded in Media mode, this command adjusts the BPM. "Detune BPM Adjust" adjusts the BPM of the phrase or rhythm by changing the pitch.
This command is available for a track when the "Detune" setting of that track is selected. When you execute this command, the selected "Detune" value will be adjusted.
For the procedure, refer to "Detune BPM Adjust" (COMBI 3.1–3b).

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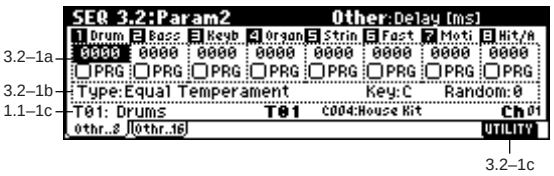
SEQ 3.2: Param2

3.2–1: Othr..8 (Other T01...08)

3.2–2: Othr..16 (Other T09...16)

Here you can make additional settings for each track.



3.2–1(2)a: Delay [ms], Use Prog's Scale

Delay [ms] (Delay Time) [0000...5000, KeyOff]

Specifies a delay time from when a track receives a note-on until it actually sounds.

KeyOff: The sound will begin when note-off occurs. In this case, the sound will continue indefinitely unless the amp EG Sustain Level of the program is other than **0**. This setting is useful for simulating harpsichord sounds.
Normally you will leave this at **0**.

Use Prog's Scale (Use Program's Scale) [On, Off]

Each track can use the scale that is specified for the program by "Type."

On (checked): The scale of the program will be used.
Off (unchecked): The scale specified by "Type" (3.2–1(2)b) will be used.

3.2–1(2)b: Scale

Specifies the scale that will be used for the song.

Type (Song's Scale)
[Equal Temperament...User Octave 15]

Indicates the type of scale (☞"Type" PROG 2.1–1c).

Key [C…B]

Indicates the tonic key of the selected scale (☞"Key" PROG 2.1–1c).

Random [0…7]

As this **value is increased**, an increasingly random deviation will be added to the pitch at each note-on (☞"Random" PROG 2.1–1c).

■ 3.2–1(2)c: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

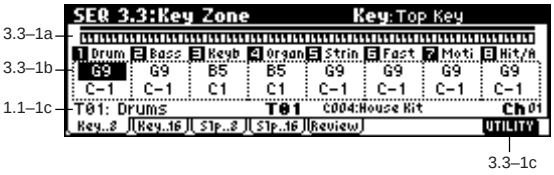
SEQ 3.3: Key Zone

Here you can specify the range of keys that will be sounded by each track.
Top / Bottom Key settings specify the range of notes that will be sounded by **tracks 1–8**, **9–16**, and Top / Bottom Slope settings specify the range from the top / bottom key until the original volume is reached.

MIDI These settings do not affect MIDI transmission / reception. All note data that is received will be recorded into the internal sequencer, and all note data from the internal sequencer or from the keyboard will be transmitted.

3.3–1: Key..8 (Key T01...08)

3.3–2: Key..16 (Key T09...16)



3.3–1(2)a: Key Zone Map

This shows the range of note data that will sound the currently selected track.
The note range that will be sounded is shown as a line, and the slope portion is grayed. (☞p.39 COMBI 3.3–1a)

3.3–1(2)b: Top Key, Bottom Key

Top Key [C–1...G9]

Specifies the top key (upper limit) that will be sounded by each track 1–8, 9–16.

Bottom Key [C–1...G9]

Specifies the bottom key (lower limit) that will be sounded by each track 1–8, 9–16. For a diagram of Key and Slope parameters, refer to "COMBI 3.3: Ed-Key Zone."

note You can also enter a value for these parameters by playing a note while you hold down the [ENTER] key.

■ 3.3–1(2)c: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

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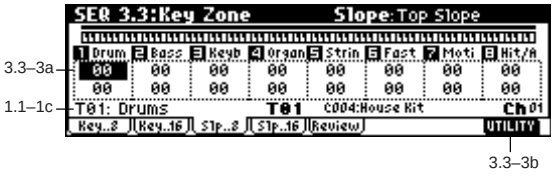
3.3–3: Slp..8 (Slope T01...08)

3.3–4: Slp..16 (Slope T09...16)



3.3–3(4)a: Top Slope, Bottom Slope

Top Slope **[00...72]**

Specifies the key range (12 is one octave) from the top key until the original volume is reached.

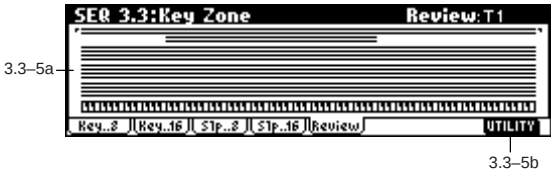
Bottom Slope **[00...72]**

Specifies the key range (12 is one octave) from the bottom key until the original volume is reached.

■ 3.3–3(4)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

3.3–5: Review



3.3–5a: Key Zone Map (All)

T1...16

This shows the range of note data that will be sounded by tracks 1–16. The note range that will be sounded is shown as a line, and the slope portion is grayed.

■ 3.3–5b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

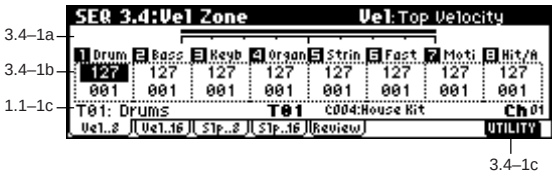
SEQ 3.4: Vel Zone

Top / Bottom Velocity specify the range of velocities that will be sounded by tracks 1–8 and 9–16, and Top / Bottom Slope specify the range over which the volume will be adjusted.

MIDI These settings do not affect MIDI transmission / reception. All note data that is received will be recorded into the internal sequencer, and all note data from the internal sequencer or from the keyboard will be transmitted.

3.4–1: Vel..8 (Vel T01...08)

3.4–2: Vel..16 (Vel T09...16)



3.4–1(2)a: Velocity Zone Map (1)

This shows the range of velocities that will sound the currently selected track.
The velocity range that will be sounded is shown as a line, and the slope portion is grayed. (☞p.40 COMBI 3.4–1a)

3.4–1(2)b: Top Velocity, Bottom Velocity

Top Velocity **[1...127]**

Specifies the maximum velocity that will be sounded by each track 1–8, 9–16.

Bottom Velocity **[1...127]**

Specifies the minimum velocity that will be sounded by each track 1–8, 9–16.
For a diagram of these parameters, refer to "COMBI 3.4: Ed-Vel Zone."

note You can also enter a value for these parameters by playing a note while you hold down the [ENTER] key.

■ 3.4–1(2)c: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

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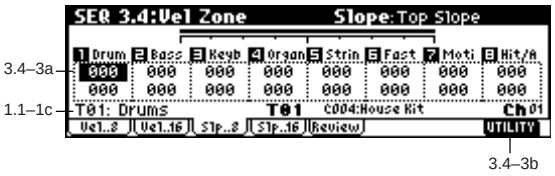
3.4–3: Slp..8 (Slope T01...08)

3.4–4: Slp..16 (Slope T09...16)



3.4–3(4)a: Top Slope, Bottom Slope

Top Slope **[0...120]**

Specifies the range of values over which the volume will be adjusted from the top velocity until the original volume is reached.

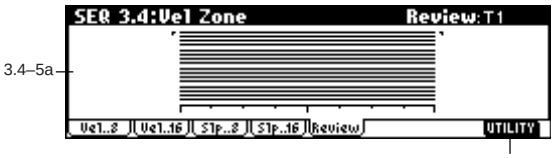
Bottom Slope **[0...120]**

Specifies the range of values over which the volume will be adjusted from the bottom velocity until the original volume is reached.

■ 3.4–3(4)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

3.4–5: Review



3.4–5a: Velocity Zone Map (All)

T1...16

This shows the range of velocity that will be sounded by tracks 1–16. The note range that will be sounded is shown as a line, and the slope portion is grayed.

■ 3.4–5b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

SEQ 4.1: MIDI Filter1

Here you can select whether or not to apply filtering to the MIDI data received by tracks 1–16. For example even if two tracks are receiving the same MIDI channels, one can be made to respond to damper pedal activity while the other does not.

note These MIDI filter settings have no effect on the MIDI messages that have already been recorded.

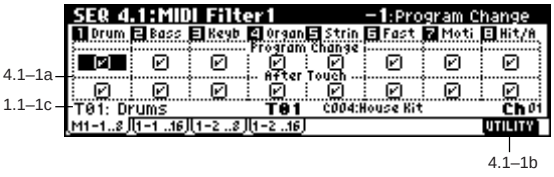
note These MIDI filter settings do not affect the transmission of MIDI messages that have already been recorded. These settings affect the MIDI messages that are transmitted when you adjust program, pan, volume, portamento and send 1 / 2 parameters of a track whose "Status" (3.1–1(2)a) is set to **BTH**, **EXT**, or **EX2**.

On (checked): Reception of MIDI data is enabled.
Tracks whose "Status" (3.1–1(2)a) is **INT** or **BTH** will receive MIDI messages whose channel matches and whose types are checked. The types of effect that are checked will be applied to the program of each track when this instrument's controllers are operated or when MIDI data is received. (The effect dynamic modulation function is not affected by these settings.) Settings that regulate MIDI transmission / reception of this instrument itself are made in "MIDI Filter" (GLOBAL 2.1–1b).
If the user-assignable controllers that can be filtered in the MIDI Filter 3 and MIDI Filter 4 pages are set to MIDI control changes, filtering will be performed for these control changes. In this case, any control change filtering that is being performed in the MIDI Filter 1 and MIDI Filter 2 pages will be given priority. Furthermore, if the same control change is assigned to multiple controllers for which there are filter settings in the MIDI Filter 3 and 4 pages, checking any one of these will enable that control change.

Off (unchecked): Reception of MIDI data is disabled.

4.1–1: M1–1..8 (MIDI Filter1–1 T01...08)

4.1–2: 1–1..16 (MIDI Filter1–1 T09...16)



4.1–1(2)a: Program Change, After Touch

Program Change **[Off, On]**

Specifies whether or not MIDI program change messages will be received.

After Touch **[Off, On]**

Specifies whether or not MIDI after touch messages will be received.

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■ 4.1–1(2)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

4.1–3: 1–2..8 (MIDI Filter1–2 T01...08)

4.1–4: 1–2..16 (MIDI Filter1–2 T09...16)

4.1–3(4)a: Damper, Portamento SW

Damper CC#64 **[Off, On]**

Specifies whether or not MIDI control change message #64 Hold (damper pedal) will be received.

Portamento SW CC#65 **[Off, On]**

Specifies whether or not MIDI control change message #65 Portamento On / Off will be received.

4.1–3(4)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

SEQ 4.2: MIDI Filter2

4.2–1: M2–1..8 (MIDI Filter2–1 T01...08)

4.2–2: 2–1..16 (MIDI Filter2–1 T09...16)

4.2–1(2)a: JS+Y, JS-Y

JS+Y CC#01 **[Off, On]**

Specifies whether or not MIDI control message #1 (the +Y axis of this instrument's joystick, or assigned to B-mode of the REALTIME CONTROL knobs [1]–[4]) will be received.

JS-Y CC#02 **[Off, On]**

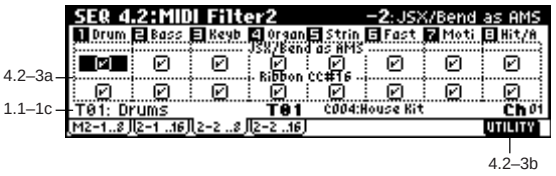
Specifies whether or not MIDI control message #2 (the –Y axis of this instrument's joystick, or assigned to B-mode of the REALTIME CONTROL knobs [1]–[4]) will be received.

■ 4.2–1(2)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

4.2–3: 2–2..8 (MIDI Filter2–2 T01...08)

4.2–4: 2–2..16 (MIDI Filter2–2 T09...16)



4.2–3(4)a: JSX / Bend as AMS, Ribbon

JSX / Bend as AMS **[Off, On]**

Allow incoming MIDI pitch bend messages (the X-axis of this instrument's joystick) to control the AMS (☞"Alternate Modulation Source") that is specified for JS X. (This is not a reception filter for MIDI pitch bend messages.)

Ribbon CC#16 **[Off, On]**

Specifies whether MIDI control change message #16 (specified as the B-mode assignment of REALTIME CONTROLS knobs [1]–[4], or the ribbon controller of a TRITON etc.) will be received.

■ 4.2–3(4)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

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SEQ 4.3: MIDI Filter3

Specifies whether the A- and B-mode operations of REAL-TIME CONTROLS knobs [1]–[4] will be received. MIDI control messages are fixed as the A-mode operation of each knob. In B-mode the knobs correspond to the messages you assign in the 2.2: Controller Controls page.

4.3–1: M3–1..8 (MIDI Filter3–1 T01...08)

4.3–2: 3–1..16 (MIDI Filter3–1 T09...16)

4.3–3: 3–2..8 (MIDI Filter3–2 T01...08)

4.3–4: 3–2..16 (MIDI Filter3–2 T09...16)

4.3–1(2)a: Real-time Control Knob 1, 2

Knob1 **[Off, On]**

Specifies whether or not the A-mode MIDI control change message #74 (this instrument's low pass filter cutoff frequency) and the B-mode MIDI control change message will be received.

Knob2 **[Off, On]**

Specifies whether or not the A-mode MIDI control change message #71 (this instrument's low pass filter resonance or high pass filter cutoff frequency) and the B-mode MIDI control change message will be received.

4.3–3(4)a: Real-time Control Knob 3, 4

Knob3 **[Off, On]**

Specifies whether or not the A-mode MIDI control change message #79 (this instrument's filter EG intensity) and the B-mode MIDI control change message will be received.

Knob4 **[Off, On]**

Specifies whether or not the A-mode MIDI control change message #72 (the release time of this instrument's filter and amp EG's, release time) and the B-mode MIDI control change message will be received.

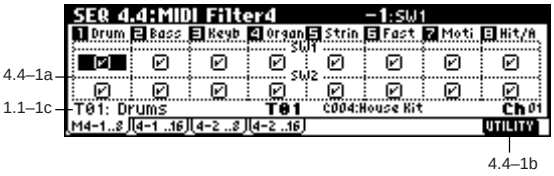
■ 4.3–1(2)b, 4.3–3(4)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

SEQ 4.4: MIDI Filter4

4.4–1: M4–1..8 (MIDI Filter4–1 T01...08)

4.4–2: 4–2..16 (MIDI Filter4–1 T09...16)



4.4–1(2)a: SW1, SW2

SW1, SW2 **[Off, On]**

Specifies whether or not the effect of the [SW1] and [SW2] keys will be received. The function of these keys can be set in the 2.2: Controller page. This is valid when the switches are set to **SW1 Mod.(CC#80)**, **SW2 Mod.(CC#81)** or **Porta.SW(CC#65)**.

■ 4.4–1(2)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

4.4–3: 4–2..8 (MIDI Filter4–2 T01...08)

4.4–4: 4–2..16 (MIDI Filter4–2 T09...16)

4.4–3(4)a: Foot Pedal / Switch, Other Control Change

Foot Pedal / Switch **[Off, On]**

Specifies whether or not the effect of the ASSIGNABLE PEDAL / SWITCH will be received. The function of this switch is set in GLOBAL 1.1: System Foot page. This is valid when the switch is set to a MIDI control change.

Other Control Change **[Off, On]**

Specifies whether or not MIDI controller messages other than those included in MIDI Filter 1–4 will be received.

■ 4.4–3(4)b: UTILITY

☞"Memory Status," "Solo Selected Track," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi," "Load Template Song," "Save Template Song," "FF / REW Speed," "Set Location" (1.1–1d)

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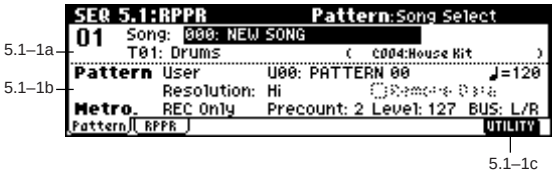
SEQ 5.1: RPPR

On this instrument you can **use preset patterns P000–149**, and **user patterns U00–99**. One song can contain up to one hundred user patterns. Preset patterns suitable for use in a drum track are provided in memory, and can be selected from any song.
Preset patterns cannot be edited, but you may copy a preset pattern to a user pattern, and edit.
User patterns can be created by realtime recording (including recording that uses the arpeggiator), step recording, the Get From Track command (obtaining data from a track), or the Copy Pattern command (copying from another pattern) (☞✣✧ ❒↖✘⁄).
These patterns can be assigned to each key by the RPPR (Real-time Pattern Play / Recording) function and played by pressing a single key, and the resulting performance can be recorded on the sequencer (☞5.1–2: RPPR Setup page).

5.1–1: Pattern

If you wish to record pattern data, use "Pattern Bank" and "Pattern Select" to select a user pattern and pattern number. Next, use the "Pattern Param. (Pattern Parameter)" page menu command to set the number of measures in the pattern and its time signature. Then you can perform real-time recording in the Pattern Edit tab, or step recording by using the "Step Recording (Loop)" page menu command. Finally, use page menu commands as desired to perform event editing or other types of editing.



5.1–1a: Location, Song Select, Track Select

Location

This shows the current location of the selected pattern, in measure units.

Song Select **[000…199: name]**

Selects the song that you wish to use. (☞1.1–1b)

Track Select **[T01…T16: name]**

Selects the track that will record / play the pattern data. (☞1.1–1c)
The program bank, number, and name of the selected track will be displayed at the right.

5–1–1b: Pattern, Metro. (Metronome)

Pattern:

Pattern (Pattern Bank) **[Preset, User]**

Indicates the type of pattern.
If you select **Preset**, recording will not be possible. You will be able to select and execute the utility menu commands "Copy Pattern," "Bounce Pattern," "Put To Track," and "Copy To Track."

Pattern Select **[P00...149, U00..U99]**

Indicates the pattern. User patterns can be renamed by the utility menu command "Rename Pattern."

♩ (Tempo) **[040...240, EXT]**

Specifies the playback tempo of the pattern. Refer to "♩ (Tempo)" (1.1–1a).

Resolution **[Hi, 𝅘𝅥𝅯₃ ... ♩]**

Specifies a correction to the timing when real-time recording a pattern. (☞1.1–1a "Reso (Resolution)")

Remove Data **[Off, On]**

Deletes unwanted musical data while recording a pattern. (☞p.1.1–6a "Remove Data")

Metro. (Metronome):

The metronome parameters you specify here are linked with the 1.1: Play / REC, Preference page Metronome parameters (1.1–6a).

Metronome Sound **[REC Only, REC / Play, Off]**

Specifies whether the metronome will sound during recording or playback. (☞1.1–6a "Sound (Metronome Sound)")

Precount **[0...2]**

Specifies the number of measures in the pre-count before recording begins. (☞1.1–6a "Precount")

Level **[000...127]**

Specifies the volume of the metronome. (☞1.1–6a "Level")

BUS (BUS Select) **[L / R, L, R, 1, 2, 1 / 2]**

Specifies the output destination of the metronome sound. (☞1.1–6a "BUS")

■ 5.1–1c: UTILITY

☞"Memory Status," "Rename Track" (1.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

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Rename Pattern

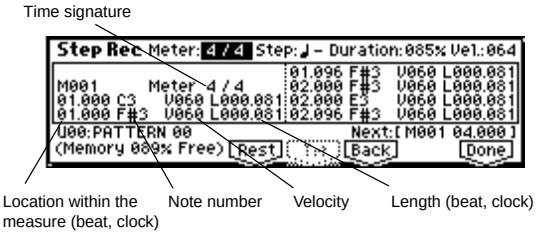
Press the [F5] (“Name”) key to access the dialog box, and rename the selected pattern.
You may input up to sixteen characters. (☞BG p.43)

Step Rec (Loop)

Here you can perform step recording into a pattern.
This is available when a user pattern is selected.

① In “Pattern Bank” and “Pattern Select,” specify the pattern. By default, the pattern length is one measure. If you wish to change the number of measures in the pattern, set the Utility “Pattern Param.”

② Select the “Step Rec (Loop)” to access the dialog box.



③ The remaining steps are the same as when step recording a track. Refer to steps ③ and following of “Step Recording” (5.2–1b). However, step recording a pattern differs from step recording a track in that when you reach the end of the pattern, you will automatically return to the beginning of the pattern and continue recording, allowing you to add more data.

Event Edit

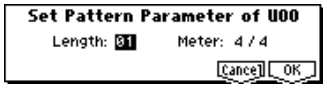
Here you can edit individual events of the musical data in a pattern that you input.
Use “Pattern Bank” and “Pattern Select” to specify the pattern that you wish to edit.
For the remaining steps, refer to “Event Edit” (5.2–1b).

Pattern Param. (Pattern Parameter)

This command specifies the number of measures and the time signature of the selected pattern.

① Use “Pattern Bank” and “Pattern Select” to specify the pattern.

② Select “Pattern Param.” to access the dialog box.



③ In “Length,” specify the number of measures in the pattern.

④ In “Meter,” specify the time signature of the pattern. However, this time signature is only temporary, and when you “put” the pattern in a track of a song, the pattern will play according to the time signature of that measure.

⑤ To execute the Pattern Parameter settings, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Erase Pattern

This command erases the musical data from the selected pattern.

① Use “Pattern Bank” and “Pattern Select” to specify the pattern.

② Select “Erase Pattern” to access the dialog box.

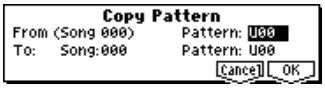
③ If you **check** “All Pattern,” all user patterns in the song will be erased.
If “All Patterns” is **not checked**, only the pattern specified in ① will be erased.

④ To execute the Erase Pattern command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Copy Pattern

This command copies the settings and musical data of the selected pattern to another pattern.
User patterns belong to a particular song, but you can use the Copy Pattern command to use a pattern in another song. While preset patterns cannot be edited, you can copy a preset pattern to a user pattern and then edit and save it as a user pattern. Be aware that when you execute the Copy Pattern operation, the pattern settings and musical data of the copy destination will be erased.

① Select “Copy Pattern” to access the dialog box.



② In From: “Pattern,” specify the copy source pattern. (By default, this will be the pattern that was selected in the page.)

③ In To: “Song” and “Pattern,” specify the copy destination song and pattern. For “Pattern,” only user patterns **U00–U99** can be specified.

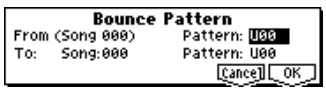
④ To execute the Copy Pattern command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Bounce Pattern

This command combines the musical data of the bounce source pattern and bounce destination pattern, and places the combined musical data in the bounce destination. The time signature and length of the pattern following execution will be according to the settings of the bounce destination. If MIDI control data exists in the selected pattern and in the bounce destination pattern, the resulting playback following the bounce operation may produce unexpected results. We recommend that you use “Event Edit” (5.1–1c) to prepare the MIDI control data of the two patterns before executing the Bounce Pattern command.

① Use “Pattern Bank” and “Pattern Select” to specify the bounce source pattern.

② Select “Bounce Pattern” to access the dialog box.



③ In From “Pattern,” select the bounce source pattern. (By default, the pattern that are selected in the page will be chosen.)

④ In To: “Song” and “Pattern,” select the bounce destination song and pattern. For “Pattern,” only user patterns **U00–U99** can be specified.

⑤ To execute the Bounce Pattern command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

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Get From Track

This command loads musical data from a track into the specified pattern.

① Use “Pattern” and “Pattern Select” to specify the pattern.

② In “Pattern Param.”, specify the pattern length of the “get” destination.

③ Select “Get From Track” to access the dialog box.

④ In “From: Song,” select the “get” source song.

⑤ In “Track,” select the “get” source track.

⑥ In “Measure,” specify the first measure of the “get” source.

⑦ To execute the Get From Track command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

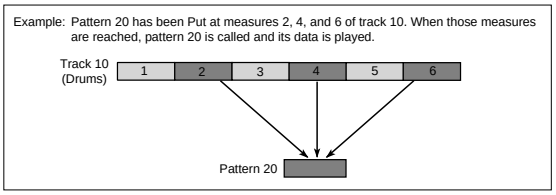
Put To Track

This command places a pattern into a track.
Unlike the Copy to Track command, this command only places the pattern number in the song, so that when playback reaches that point, the pattern will be recalled. The musical data of the pattern will not actually exist in the track.
By creating patterns that contain frequently-used phrases or drum patterns, and then placing them on the tracks, you can conserve memory.
Be aware that when you edit a pattern, all locations in the song where that pattern has been placed will be affected.

When you execute the Put to Track command, the musical data will be affected as follows.

- Musical data previously existing at the “put” destination will be erased.
- The pattern that you “put” will playback according to the time signature that is specified by the measures of the “put” destination.
- Control data such as pitch bend etc. (but not including volume data) previously existing in the track will be reset immediately before the measure at which the pattern was “put.”

If you wish to use control data such as pitch bend in the measures in which a pattern is “put,” you must first write the control data into the pattern (☞BG p.81).
To delete a pattern that has been placed in a track you can use “Erase Measure” (5.2–1b), specifying the area in which the pattern was “put,” and setting “Kind” to **All**.



① Select “Put to Track” to access the dialog box

② In “Pattern Bank” and “Pattern Select,” select the “put” source pattern. (By default, this will be the pattern selected in page)

③ In “To: Track,” select the “put” destination track.

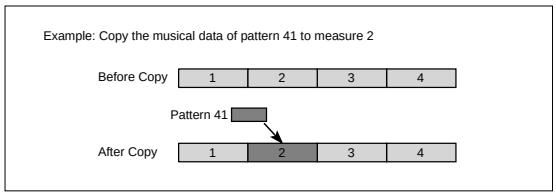
④ In “Measure,” specify the first measure of the “put” destination.

⑤ To execute the Put to Track command, press the [F6] (“Put”) key. When you execute the command, “Measure” will automatically count up. If you wish to, you can continue “putting” the pattern. To exit the command, press the [F7] (“Exit”) key.

Copy To Track

This command copies the specified area of musical data from the specified pattern to a track as musical data.
Unlike the Put To Track command, this command actually writes the musical data of the pattern into the track, so that you can edit the copied data in the track. Even if you later edit the copy source pattern, the musical data of the song will not be affected.
When you execute the Copy to Track command, the musical data will be affected as follows.

- Musical data previously existing in the copy destination measures will be erased.
- The musical data that is copied will playback according to the time signature specified at the beginning of the copy destination measures.



The procedure is the same as for the Put to Track command. ☞“Put To Track” (5.1–1c).

Rename Track

Press the [F5] (“Name”) key to access the dialog box and rename the selected track.
Up to sixteen characters can be input. (☞BG p.43)

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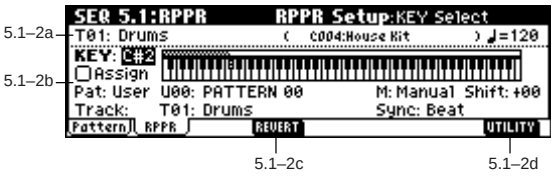
5.1–2: RPPR Setup

Here you can make settings for the RPPR (Real-time Pattern Play / Recording) function. RPPR lets you assign a pattern from a song to each key, and then playback patterns simply by pressing individual notes on the keyboard. The results can also be recorded.
For each song, you can assign either a preset pattern or a user pattern to each of the seventy two keys in the range C#2–C8. For each key, you can specify the pattern, track number, and how the pattern will be played.

The arpeggiator is not operated by patterns played back by RPPR. When RPPR is on, keys for which no pattern is assigned will sound the track selected by "Track Select." At this time, the arpeggiator will operate if either arpeggiator A or B is selected for that track and turned on. RPPR will not be triggered by notes generated by the arpeggiator.

When Local Control is OFF ("Local Control On" GLOBAL 2.1–1a), the keyboard will not trigger RPPR pattern playback. Notes received at MIDI IN on the channel of the track currently selected by "Track Select" will trigger patterns. If you have recorded only the trigger notes on an external sequencer and wish to playback the external sequencer to trigger RPPR patterns on this instrument, set Local Control OFF.
If you want the note data generated by RPPR to be recorded on the external sequencer, set Local Control ON, and turn off the echo back function of the external sequencer.

In the RPPR Setup page, RPPR is turned on automatically. This will be the same result as when the RPPR check box (1.1–1c) in each page is checked.



5.1–2a: Track Select, ♩ (Tempo)

Track Select **[T01…T16: name]**

Indicates the track that will trigger RPPR. When note data is received on the MIDI channel of the selected track, the corresponding pattern will play. (☞1.1–1c)
The program bank, number, and name of the selected track will be displayed at the right.

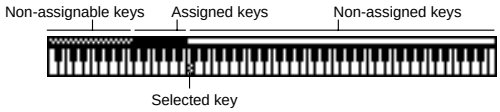
♩ (Tempo) **[040…240, EXT]**

Specifies the playback tempo for RPPR. Refer to "♩(Tempo)" (☞1.1–1a).

5.1–2b: RPPR Setup

Keyboard & Assigned drawing

This shows the selected key, and the keys to which a pattern has been assigned by the RPPR function. (Assignments are not possible for the keys displayed in gray.)



KEY (Key Select) **[C#2…C8]**

Indicates the key that you wish to edit. The following parameters will apply to the key that you select here.
The key can also be selected by holding down the [ENTER] key and playing a note on the keyboard.

Assign **[Off, On]**

On (checked): When you play the key specified by "KEY," the pattern selected in "Pat (Pattern Bank)," "Pattern Select" will be triggered.
Off (unchecked): That key will sound the currently selected track at the corresponding pitch, just as in normal Sequencer mode.

Pattern (Pattern Bank) **[Pre, User]**

Pattern Select **[P000…149, U00…99]**

Indicates the RPPR pattern for the key selected in "KEY." If the selected user pattern contains no musical data, there will be no sound when you press that key.

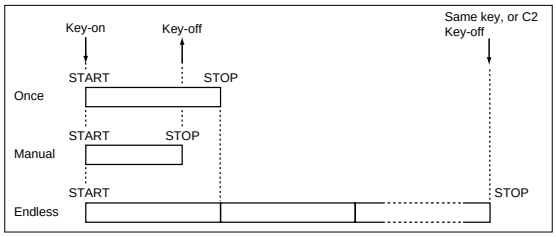
Track **[T01…T16: name]**

Indicates the track that will be used for the RPPR pattern selected for the "KEY." When you play the key, the pattern will be played according to the settings of the track you select here. Track settings are made in 1.1: Play / REC–4.4: MIDI Filter 4. When you record in real-time with the RPPN function turned on, the data will be recorded on the track you select here. (☞BG p.74)

M (Mode) **[Once, Manual, Endless]**

Specifies how the pattern of the specified "KEY" will be played.

Once: When you press the key, the pattern will playback only once to the end.
Manual: The pattern will continue repeating as long as you continue holding the key, and will stop when you release the key.
Endless: The pattern will continue repeating even after you release the key. To stop the pattern playback, press any note below C2, or press the same key once again.



Shift **[–12…+12]**

Adjust the playback pitch of the pattern for the specified "KEY" in semitone steps over a range of ±1 octave. With a setting of **0**, the pattern will be played at its original pitch.

Sync **[Off, Beat, Measure, SEQ]**

Specifies how the pattern playback will be synchronized when you press the specified "KEY."

Off: The pattern will begin playing at the moment you press the note.
Beat: The pattern will synchronize to the beats of the pattern that was started by the first key (i.e., the first note-on that occurs from a condition where no notes of the keyboard are pressed). This setting is suitable when you wish to play phrase patterns in unison.

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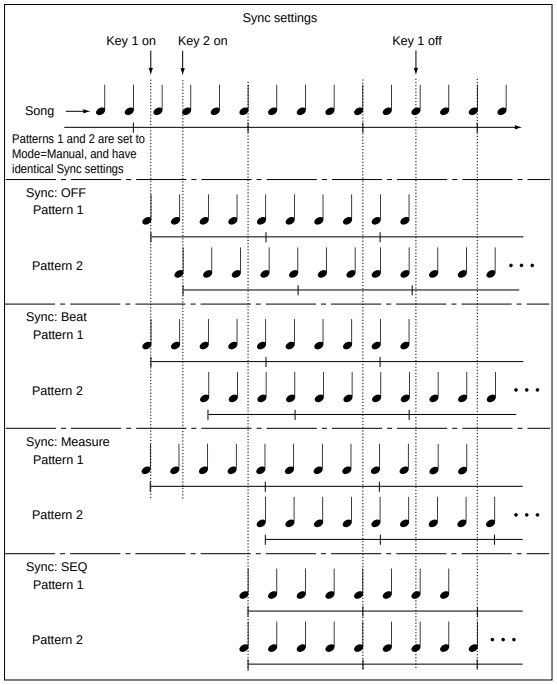
Measure: The pattern will synchronize to the measures of the pattern that was started by the first key. This setting is suitable for rhythm, bass or drum patterns.
SEQ: The pattern will synchronize to the measures of the sequencer song.



- When **Beat** or **Measure** are selected, pattern playback will begin when you press the first key. The second and subsequent patterns that are triggered from the keyboard will synchronize to the pattern that was started by the first key; with a setting of **Beat** they will synchronize in steps of a beat, and with a setting of **Measure** they will synchronize in steps of a measure.
- When **SEQ** is selected, the pattern will playback in synchronization with the measures of the sequencer song. The pattern will synchronize with the currently-playing song, so you must start the song before you play notes on the keyboard.
- **Beat**, **Measure**, and **SEQ** will cause the pattern to start immediately if you play the key within a thirty-second note of the timing of the respective beat or measure, but if you play the key later than this, the start of the pattern will be delayed by a beat.

Stopping playback of a RPPR pattern
By pressing C2 or any lower note, all the patterns being played by **RPPR** will stop.
The patterns of keys whose "Sync" setting is **Off** will stop immediately, but the playback of other keys will stop at the beginning of the next beat or measure. Pattern playback of keys whose "Sync" setting is **other than Off** can be stopped immediately by rapidly pressing C2 or any lower note twice in succession.

■ 5.1–2c: REVERT

This copies "Pat (Pattern Bank)," "Pattern Select" and "Track" settings from the previously-edited "KEY" whose "Assign" is **checked** to the currently-edited "KEY."

Example)
Using RPPR to assign preset patterns P00, P01, and P02 to keys
Before you begin, assign a drum program such as **A036** to track 1.

① Select **C#2** as the "KEY." **Check** "Assign," and set "Pat (Pattern Bank)," "Pattern Select," and "Track."

② Select **D2** as the "KEY."
③ Press the [F4]("REVERT") key, and the "Pat (Pattern Bank)," "Pattern Select" (**Pat: Pre, P00: Pop&Balad 1/Std**) and "Track" (**T01: Drums**) that you selected in step ① will be copied automatically.
④ Change only the "Pattern Select." Select "Pattern Select," and press the [INC] key to select **P01: Pop&Balad 2/Std**.
⑤ Select **D#2** as the "KEY."
⑥ Press the [F4]("REVERT") key, and the "Pat (Pattern Bank)," "Pattern Select" (**Pat: Pre, P01: Pop&Balad 2/Std**) and "Track" (**T01: Drums**) that you selected in step ④ will be copied automatically.
⑦ As you did in step ④, set "Pattern Select" to **P02: Pop&Balad 3/Std**.

In this way you can use the "REVERT" to efficiently assign "Pat (Pattern Bank)," "Pattern Select" and "Track" to each "KEY" of an RPPR Setup. This function is particularly convenient when the patterns you are assigning to each key are numbered consecutively or close to each other, and are used in the same track, as in the example shown above.

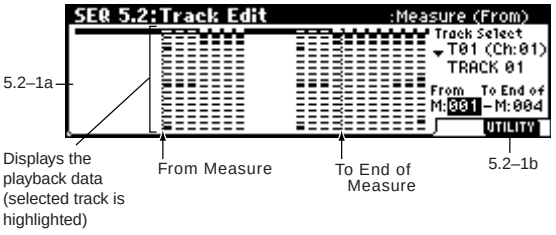
■ 5.1–2d: UTILITY

☞"Memory Status" (1.1–1d), "Rename Track" (5.1–1c)

SEQ 5.2: Track Edit

5.2–1: Track Edit

Here you can edit the settings of the currently selected track and the musical data that has already been recorded, as well as perform step recording.
When you wish to edit musical data or perform step recording, first use the tab page window to select the track and specify the desired area. Then select the appropriate utility menu command.



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5.2–1a: Track Select, Measure (From) / Meas. (To End of)

Track Select [T01...T16, Master Trk]

Use the cursor keys [▲][▼] to select the track in which you wish to record or edit (or use as the copy source).
If you wish to select all tracks, you do not need to select T01...T16. Simply check "All Tracks" in the dialog box of the utility menu command.
Master Trk: You can edit the tempo and time signature of the master track.

Measure (From) [001...999]

Specify the first measure that will be edited (or used as the copy source) or step-recorded.

Meas. (To End of) [001...999]

Specify the last measure that will be edited (or used as the copy source).

■ 5.2–1b: UTILITY

☞"Memory Status" (1.1–1d), "Rename Track" (5.1–1c)

Step Recording

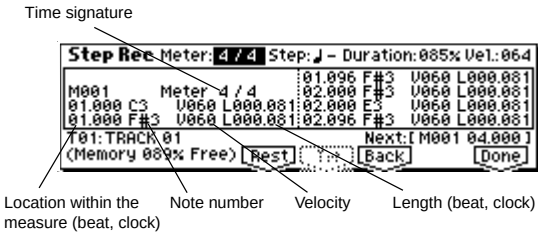
Step recording allows you to specify the length and velocity of each note numerically, and to input the pitches from the keyboard. You can use the[F4] ("Rest") key and [F5] ("Tie") key to input a rest or tie.

Be aware that if you step-record onto a track which already contains sequence data, all data will be erased from the measure specified in "Measure (From)" and all subsequent measures.

It is best to use the "Create / Ers. Ctrl" Create mode to input data whose data whose value changes continuously, such as pitch bend, and to use "Event Edit" to input individual data items such as program changes.

① Use "Track Select" to select the track into which you wish to input data, and use Track Edit tab item "Measure (From)" to specify the measure at which you wish to begin input.

② When you select "Step Recording," the following dialog box will appear.



③ In "Meter," set the time signature.
This will show the time signature that has already been set for the measure.
If you change the time signature setting, the time signature data of the measures you record will change, and all tracks will change to the time signature you specified.

④ In "Step (Step Time)," specify the length of the basic step that you wish to input, in terms of a note value.
For "Step (Step Time)," a Triplet (3) / Normal(–) / Dot(.) symbol located at the right of the note type indicates the length of the note.
The note type can be selected from a range of 𝅝 (whole note) – 𝅘𝅥𝅯𝅘𝅥𝅯 (32nd note).
If you set Triplet / Normal / Dot to **3** (Triplet), triplets of the specified note value will be used as the step time. If you select "–" (Normal), the specified note value will be used without change. If you select "." (Dot), the specified note will be dotted.
The following table shows the number of clocks for each "Step (Step Time)" setting.

𝅘𝅥𝅯𝅘𝅥𝅯 (0:24)	𝅘𝅥𝅯 (0:48)	𝅘𝅥𝅮 (0:96)	♩ (1:00)	𝅗𝅥 (2:00)	𝅝 (4:00)
𝅘𝅥𝅯𝅘𝅥𝅯. (0:36)	𝅘𝅥𝅯. (0:72)	𝅘𝅥𝅮. (0:144)	♩. (1:96)	𝅗𝅥. (3:00)	𝅝. (6:00)
3 𝅘𝅥𝅯𝅘𝅥𝅯 (0:16)	3 𝅘𝅥𝅯 (0:32)	3 𝅘𝅥𝅮 (0:64)	3 ♩ (0:128)	3 𝅗𝅥 (1:64)	3 𝅝 (2:128)

⑤ In "Duration," specify the length that the note will actually be held, relative to the "Step (Step Time)." In general, **100%** will be tenuto, **85%** will be normal, and **50%** will be staccato.

⑥ Use "Vel (Velocity)" to specify the velocity value (keyboard playing strength) of the note data. With the [PAUSE] key pressed, you can hold down the [ENTER] key and play a note on the keyboard to specify the velocity value. If you set this to **Key**, the actual velocity at which you played the key will be input.

⑦ Note events can be input as described below, using commands from the keyboard and function keys.

Inputting notes

When you press a key on the keyboard, that note number will be input as a note of the length specified in ④.
When you press a chord on the keyboard, those note numbers will be input as chords of the length specified in ④. Since each of the note numbers you press before releasing all of the keys will be input at the same location, the notes will be input as a chord even if they are actually played at different times.
Each time you press and release the keyboard, the location will advance by the length specified in ④.

Inputting rests

Press the [F4] ("Rest") key to input a rest of the length specified in ④.

Inputting a tie

If you press the [F5] ("Tie") key without pressing the keyboard, the previously-input note will be tied, and lengthened by the amount specified in ④.
If you press the [F5] ("Tie") key while holding down a note, the note you are playing will be tied, and lengthened by the amount specified in ④.

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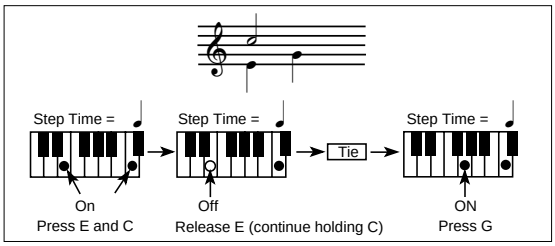
You can even input notes as shown in the following diagram.



Deleting a note or rest

To delete a note or rest, press the [F6] ("Back") key. The location will move backward by the amount specified in ④, and the data in that interval will be deleted.

Auditioning the next note before input

If you wish to make sure of the next note before you actually input it, press the [PAUSE] key (the LED will light). Now when you press a key, you will hear sound but the note will not be input. Press the [PAUSE] key once again (the LED will go dark) to cancel the pause mode and resume input.

⑧ When you are finished with step recording, press the [F8] ("Done") key. If you press the [COMPARE] key, you will return to the condition of before you began step recording.

Event Edit

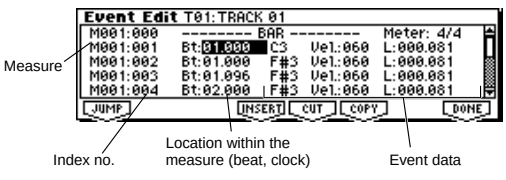
Here you can edit individual events of music data that were input.

① Use "Track Select" to select the track that you wish to edit, and use the Track Edit tab "Measure (From)" field to specify the measure at which you wish to begin editing.

② If you selected Track01–16 in "Track Select," selecting this command will open the Set Event Filters dialog box.

In the Set Event Filters dialog box you can select the types of events (musical data) that will appear and can be edited in the event edit window.
For "Note" you can set "Btm (Bottom)" and "Top" to specify the range of notes. These settings can also be entered by holding down the [ENTER] key and pressing a key. Normally you will leave these set at **C–1** and **G9**.
"Control Change" lets you specify the control change number. Normally you will leave this set at **ALL**.
If you selected **Master Track** in "Track Select," this dialog box will not appear.
You can also check various other events ("Pitch Bend," "Program Change," "After Touch," and "Poly After Touch").

③ Press the [F8] ("OK") key to open the Event Edit dialog box.



④ Use the cursor keys [▲], [◄], [▼], [►] to select the event that you wish to edit.
You can also press the [F1] ("JUMP") key and use "M (Measure)" and "Index" so that the events of the measure being edited and the index number within that measure are displayed at the beginning of the dialog box.

⑤ Select the event that you wish to edit, and use the [VALUE] dial etc. to modify its value(s).
- By modifying the value of the "Bt" (Beat. Tick) location within the measure, you can move the event within the measure.
- You can edit each event by modifying its data value(s). When you select a note event, it will sound.

⑥ You can press the keys located at the function of the dialog box to edit events as follows.

Inserting an event

Select the "Bt" location where you wish to insert an event, and press the [F4] ("Insert") key to insert an event.

Deleting an event

Select the event that you wish to delete, and press the [F5] ("Cut") key to delete the event.

Moving an event

You can use the [F5] ("Cut") key and [F4] ("Insert") key to move an event (by "cut and paste").
Use the [F5] ("Cut") key to delete the event that you wish to move, then use the [F4] ("Insert") key to insert it at the desired location.
You can also move an event by modifying its "Bt" value.

Copying an event

Select the event that you wish to copy, and press the [F6] ("Copy") key. Then select the copy destination and press the [F4] ("Insert") key to insert the event at that location.

⑦ The end of the pattern is indicated as **End of Pattern**.
When you are finished event editing, press the [F8] ("OK") key. If you press the [COMPARE] key, you will return to the state before you began event editing.
The following table shows the types of musical data that can be edited by "Event Edit" and the range of their values.

BAR (displayed only) (Measure line)		Meter: 1/4...16/16 *1 (Time signature)
C–1...G9 *2 (Note data)	Val: 1...127 *2 (Velocity)	L: 000.000...15984.000 (Length: beats, clocks)
P.Aft (Polyphonic after touch)	C–1...G9 (Note number)	Val: 0...127 (Value)
Ctl.C (Control change)	#: 0...101 (Control change number)	Val: 0...127 (Value)
PROG (Program change)	Bnk: A...D, 000...127, G, g(d), - - - (Program bank)	No.: 0...127, 1...128 (G, g(d)) (Program number)
AftT (After Touch)	0...127 (value)	
BEND (Pitch bend)	–8192...+8191 (value)	

*1: Be aware that since the time signature is recorded in the master track, modifying it from any track will affect the same measure of all tracks, causing them to be played in that time signature.

*2: Note data and velocity values can also be entered by holding down the [ENTER] key and playing a note on the keyboard.

Pattern numbers will be displayed in locations in which a pattern has been "put" (placed). At the end of the track there will be an indication of End of Track.

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Erase Track

This command erases the data from the specified track. However, it is not possible to erase the master track by itself.

① In “Track Select,” select the track that you wish to erase.

② Select “Erase Track” to access the dialog box.

If you check “All Tracks,” the musical data of all tracks will be erased.

③ To execute the Erase Track command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Copy / Bounc. Trk (Copy / Bounce Track)

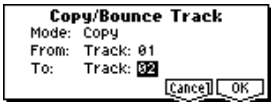
Copy Track

Copies the musical data of the copy source track to the specified track. Be aware that when you execute Copy Track, the data that previously existed in the copy destination track will be erased.

Bounce Track

Combines the musical data of the bounce source and bounce destination, and moves this data into the bounce destination. All musical data that had been in the bounce source will be erased.
If the bounce source track and bounce destination track contain MIDI control data, this operation may produce unexpected results. To prevent this from happening, use the Erase mode of the “Event Edit” or “Create / Ers. Ctrl” utilities to edit the MIDI control data of the two tracks beforehand.

① Select “Copy / Bounc. Trk” to access the dialog box.



② Set “Mode” to either Copy or Bounce.

③ Set “From” to the copy source (bounce source) track, and set “To” to the copy destination (bounce destination). (By default, “From” will be initially set to the “Track Select” track.)

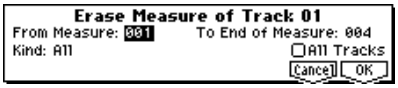
④ To execute, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

Erase Measure

This command erases the specified type(s) of musical data from the specified range of measures. The Erase Measure command can also be used to remove only a specific type of data. Unlike the Delete Measure command, executing the Erase Measure command does not cause the subsequent measures of musical data to be moved forward.

① Use “Track Select” to select a track.

② Select “Erase Measure” to access the dialog box.

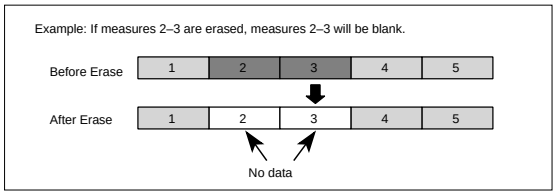


③ In “From Measure” select the first measure to be erased, and in “To End of Measure” select the last measure to be erased. (By default, “From Measure” and “To End of Measure” will be set to the range that you specified in the Track Edit page.)

④ In “Kind,” specify the type of data that will be erased. **All** will erase all types of data from the track, **Note** will erase note data, **Ctl.C** will erase control change data, **AftT** will erase both channel pressure and polyphonic key pressure data, **BEND** will erase pitch bend data, and **PROG** will erase program change data.

⑤ If you **check** “All Tracks,” the specified type of data will be erased from all tracks.

⑥ To execute the Erase Measure command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.



If control data extends across measures that were erased and measures that were not erased, only the data within the range being erased will be erased. However if note data extends across two or more measures, deleting any of the intervening measures will delete that note data from the following measures as well.

note Note data can also be erased using “Shift / Ers. Note”. Use this command when you wish to erase a specific range of notes, or to erase notes from a specific “Beat.Tick.”

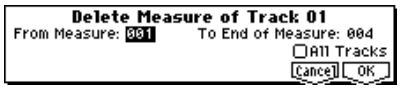
note You can also erase control changes by using the Erase mode of “Creat / Ers. Ctrl.” Use this when you wish to specify the type of control change to be deleted, or to use “Beat. Tick” units to specify the range from which the data will be deleted.

Delete Measure

This command deletes the specified measures.
When the Delete Measure command is executed, the musical data following the deleted measures will be moved forward in units of a measure.

① Use “Track Select” to select the track.

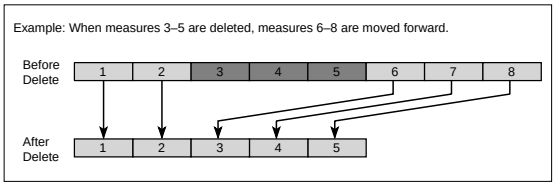
② Select “Delete Measure” to access the dialog box.



③ In “From Measure” select the first measure that you wish to delete, and in “To End of Measure” select the last measure that you wish to delete. (By default, “From Measure” and “To End of Measure” will be the range that you specified in the Track Edit page.)

④ If you wish to delete musical data from all tracks including the master track, **check** “All Tracks.”
If this is **not checked**, data will be deleted only from the track that was selected by “Track Select.”

⑤ To execute the Delete Measure command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.



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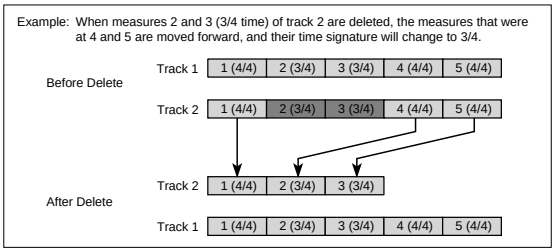
If in ④ you **uncheck** "All Tracks" and execute this operation, the measures will not be deleted from the master track. Time signature and tempo data will remain unchanged, and the time signature and tempo of the measures that were moved forward as a result of the Delete operation will change.



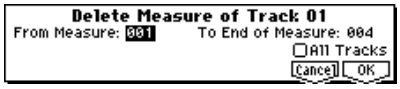
If in ④ you **check** "All Tracks" and execute this operation, the specified measures of musical data will be deleted from all tracks including the master track, and the time signature and tempo will also move forward by the number of measures that were deleted.
If control data extends across a line between measures that were deleted and measures that were not deleted, only the data within the range being deleted will be erased. However if note data extends across two or more measures, deleting any of the intervening measures will delete that note data from the following measures as well.

Insert Measure

This command inserts the specified number of measures into the specified track. When you execute the Insert Measure command, the musical data following the insert location will be moved backward.
If musical data is inserted into an area across which note data has been tied, a note-off will be created immediately before the inserted measure, and the subsequent portion of the note will be deleted.

① In "Track Select," specify the track into which you wish to insert.

② Select "Insert Measure" to access the dialog box.



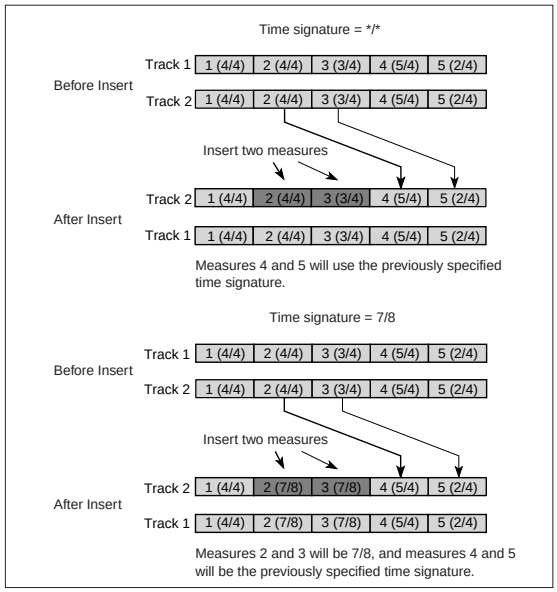
③ In "At Measure," specify the measure location at which the data will be inserted. (The measure you specified in Track Edit page "Measure (From)" will be set as a default.)

④ In "Length," specify the number of measures that will be inserted.

⑤ In "Meter," specify the time signature of the measures that will be inserted.
If you want the inserted measures to match the existing time signature, specify ***/***. With any setting other than ***/***, the time signature of the inserted measures will change, and the specified time signature will apply to all tracks for those measures.

⑥ If you wish to insert measures into all tracks including the master track, **check** "All Tracks." The musical data following the inserted measures will playback in the same way it did before the measures were inserted.
If "All Tracks" is **unchecked**, the measures will be inserted into the specified track. At this time, the musical data following the inserted location will be moved backward by the number of measures that were inserted. However, the time signature and tempo will not move.

⑦ To execute the Insert Measure command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

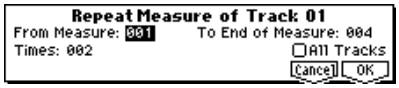


Repeat Measure

This command repeatedly inserts the specified measures for the specified number of times. When you execute the Repeat Measure command, the measures will be inserted following the measure specified by "To End of Measure," and musical data following the inserted data will be moved backward. It is convenient to use this command when you have a song that you playback with "Track Play Loop" (1.2–1(2)a) turned on, and wish to expand it into musical data.

① Use "Track Select" to select the track whose measures you wish to repeat.

② Select "Repeat Measure" to access the dialog box.

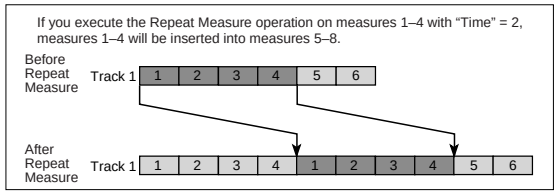


③ In "From Measure" and "To End of Measure," specify the range of measures that will be repeated. (By default, "From Measure" and "To End of Measure" will be set to the range you specified in the Track Edit page.)

④ In "Times," specify the number of repetitions. For example if you set "From Measure" to **001**, "To End of Measure" to **004**, and "Times" to **2**, the musical data of measures 1–4 will be inserted into measures 5–8. The result will be that measures 1–4 will be played twice.

⑤ If you wish to repeat the musical data of all tracks including the master track, **check** "All Tracks."

⑥ To execute the Repeat Measure command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.



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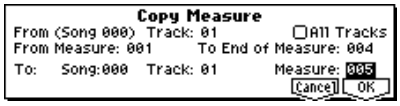
Copy Measure

This command copies measures of musical data from the copy source to the specified measure location.
When you execute the Copy Measure command, the track data at the copy destination will be rewritten.

① Select the copy source song.

② Select “Copy Measure” to access the dialog box.

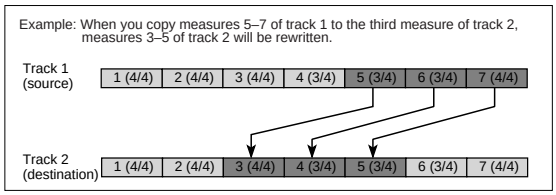


③ In “From: Track,” select the copy source track. (By default, this will be the track you selected in “Track Select.”)
If you **check** “All Tracks,” the musical data of all tracks including the master track will be copied.

④ In “From Measure” and “To End of Measure,” specify the range of copy source measures. (By default, “From Measure” and “To End of Measure” will be the range that you specified in the Track Edit page.)

⑤ In “To: Song,” specify the copy destination song. In “Track” (when “All Tracks” is **unchecked**) specify the copy destination track. In “Measure,” specify the first measure where the copied measures will be inserted.

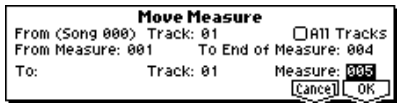
⑥ To execute the Copy Measure operation, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.



Move Measure

This command moves measures of musical data to a specified destination. When you execute the Move Measure command, musical data following the move source will be moved forward according to the number of measures moved, and musical data following the move destination will be moved backward correspondingly.

① Select “Move Measure” to access the dialog box.

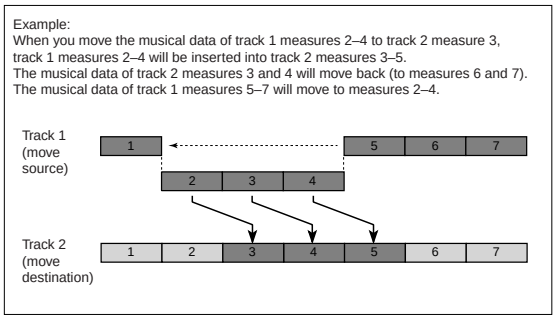


② In “From: Track,” select the move source track. (By default, this will be the track you selected in “Track Select.”)
If you **check** “All Tracks,” musical data of all tracks including the master track will be moved.

③ In “From Measure” and “To End of Measure,” specify the range of measures that will be moved. (By default, “From Measure” and “To End of Measure” will be the range that you specified in the Track Edit page.)

④ In “To: Track” (if “All Tracks” is **unchecked**), specify the move destination track. In “Measure,” specify the first measure of the move destination.

⑤ To execute the Move Measure command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.



Create / Ers. Ctrl (Create / Erase Control Data)

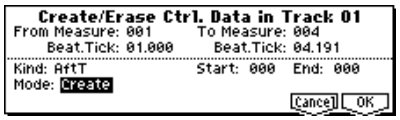
This command inserts (creates) or erases data such as control changes, aftertouch, pitch bend, or tempo in the specified region.

Create Ctrl Data (Create Control Data)

Here’s how you can insert (create) various types of data in the region you specify.

① In “Track Select,” specify the track in which you wish to create control data. If you wish to create tempo data, set this to the **Master Track**. In this case, “Kind” in step ⑤ will be **Tempo**.

② Select “Create / Ers. Ctrl” to access the dialog box.



③ Specify the region in which the control data will be inserted. Use “From Measure” to “To Measure” to specify the range of measures, and “Beat. Tick” to specify the beat and clock. (By default, “From Measure” and “To Measure” will be set to the region you specified in the Track Edit page.)

④ Set “Mode” to **Create**.

⑤ “Kind” to the type of musical data (event) that you wish to create.
Ctl.C: Control change data will be inserted. In this case, use “#” to specify the control change number.
AftT: Aftertouch data will be inserted.
BEND: Pitch bend data will be inserted.

⑥ Specify the start location value and end location value of the data that will be inserted.
“Start” specifies the value at the start location, and “End” specifies the value at the end location.
By default, the value at the start location will be set for “Start.” If you want to create control data that changes smoothly from the value at the start location, you should leave the start location value unchanged, and set only the end location value.

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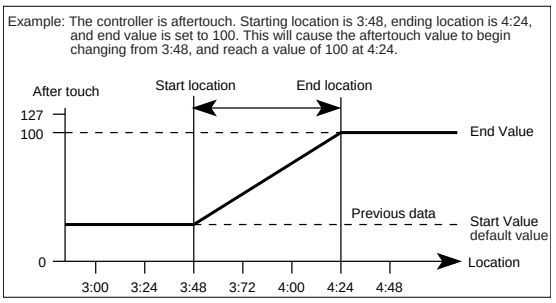
⑦ To execute the Create Control Data command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.



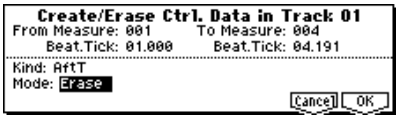
Executing the Create Control Data command will use up a substantial amount of sequencer memory. This means that if there is only a small amount of free memory remaining, it may not be possible to create the data. If this occurs, you should first use “Quantize” to quantize the data, deleting unneeded control data. Alternatively, you can apply the Quantize function to the data that was inserted by Create Control Data.

Ers. Ctrl Data (Erase Control Data)

Here’s how you can erase various types of data from the region you specify.

① In “Track Select,” specify the track from which you wish to erase control data. If you wish to erase tempo data, set this to the **Master Track**. In this case, “Kind” in step ⑤ will be **Tempo**.

② Select “Create / Ers. Ctrl” to access the dialog box.



③ Specify the region from which the control data will be erased. Use “From Measure” to “To Measure” to specify the measures, and “Beat. Tick” to specify the beat and clock. (By default, “From Measure” and “To Measure” will be set to the region you specified in the Track Edit page.)

④ Set “Mode” to **Erase**.

⑤ “Kind” to the type of musical data (event) that you wish to erase.
Ctl.C: Control change data will be erased. In this case, use “#” to specify the control change number.
AftT: Aftertouch data will be erased.
BEND: Pitch bend data will be erased.

⑥ To execute the Erase Control Data operation, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

note If you wish to erase all control changes from a certain range of measures, it is also possible to do this by using “Erase Measure” and selecting **Ctl.C** as the data to be erased. However if you use the Erase Control Data described above, you can specify the range using “Beat. Tick,” and erase only specific control change data.

Quantize

This command corrects the timing of musical data that has already been input.
When you execute the Quantize operation, the musical data will be affected as follows.

- When you execute Quantize on note data, the timing of the note-on will be corrected, but the length (duration of the note) will not be affected.
- If the Quantize resolution is set to **Hi**, the timing will be adjusted to units of the base resolution (♩/192), so note data will not be affected. However, continuous controller data such as joystick or after touch which occupies a large amount of memory will be processed so that two or more data events of an identical type existing at a single interval of the timing resolution will be combined into a single event, thus conserving memory. Similarly, two or more data events of an identical type existing at the identical timing will be combined into one, also conserving memory.

① In “Track Select,” specify the track.

② Select “Quantize” to access the dialog box.

③ Specify the range that will be quantized. In “From Measure” and “To Measure,” specify the measures. In “Beat.Tick” specify the beat and clock. (By default, “From Measure” and “To End of Measure” will be the range that you specified in the Track Edit page.)

④ Use “Kind” to select the type of musical data (events) that will be quantized.
All: All musical data will be quantized.
Note: Note data will be quantized. Use the “Range” parameters “Btm (Bottom)” and “Top” to specify the range of notes. This is useful when you wish to quantize only specific notes (for example, just the snare sound of the drum track). “Btm (Bottom)” sets the lower limit of the notes. If you wish to quantize all notes, set this to **C–1**. “Top” sets the upper limit of the notes. If you wish to quantize all notes, set this to **G9**. The note can also be set by holding down the [Enter] key and playing a key.
Ctl.C: Control changes will be quantized. To limit the type of control changes, use “#” to specify the number.
AftT: Both channel pressure and poly key pressure data will be quantized.
BEND: Pitch bend data will be quantized.
PROG: Program change data will be quantized.

⑤ In “Resolution,” specify the timing resolution to which the data will be corrected.
By setting a lower resolution you can save more memory, but the timing of the playback may not be acceptable.

⑥ In “Offset,” specify the number of clock by which the data will be moved forward or backward relative to the standard timing. A setting of **96** will be ♪, and **48** will be ♪. Positive (+) settings will adjust the data forward, and negative (–) settings will adjust the data backward. This allows you to simulate “pushing” or “dragging” the beat.

⑦ In “Intensity,” specify the degree of sensitivity to which the timing will be corrected; i.e., how close to the locations specified by ⑤ and ⑥ the data will be moved.
With a setting of **0**, no correction will take place. With a setting of **100**, the data will be moved all the way to the timing intervals specified by ⑤ and ⑥.

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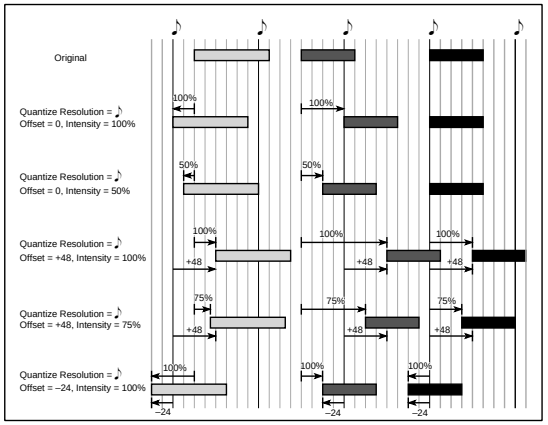
⑧ To execute the Quantize command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
By varying the Offset and Intensity settings you can create quantize effects such as the following.



Shift/Er. Note (Shift/Erase Note)

This command shifts (moves) or erases the specified note numbers in a specified track and range of measures.

① In “Track Select,” select the track on which you wish to execute the Shift/Erase Note command.

② Select “Shift/Ers. Note” to access the dialog box.

③ Specify the range in which you wish to shift or erase note numbers. In “From Measure” and “To Measure,” specify the measures. In “Beat.Tick,” specify the beat and clock. (By default, “From Measure” and “To Measure” will be the range that you specified in the Track Edit page.)

④ Specify the range of notes that you wish to shift or erase. “Note Range: Btm (Bottom)” specifies the lower limit, and “Top” specifies the upper limit. If you wish to edit all notes, set “Btm (Bottom)” to **C–1** and “Top” to **G9**. These settings can also be made by holding down the [ENTER] key as you play a note.

To shift notes

⑤ For “Mode,” select “Shift (Replace)” or “Shift (Create),” and use the parameter at the right to specify the amount by which the notes will be shifted.
The amount of shift can be adjusted in semitone steps, over a range of –127 to +127. +1 raises the note by a semitone.

⑥ Use either “Shift (Replace)” to move the note numbers, or “Shift (Create)” to add new note numbers.
For example if you have specified a drum program for the track, you can use “Replace” to change the snare sound into a different snare sound, or use “Create” to layer a sound effect on the snare sound. Or you could use this on a guitar phrase to add a lower octave to the notes.

⑦ To execute the Shift Note command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

To erase notes

⑤ For “Mode,” select **Erase**.
If you wish to erase all note data from a certain range of measures, this can also be done by using “Erase Measure” and specifying **Note**. However if you use the operation described here, you will be able to use “Beat. Tick” to specify the range, and erase only the specific notes you wish.

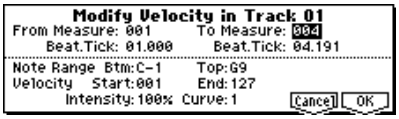
⑥ To execute the Erase Note command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

Modify Velocity

This command modifies the velocity values of notes in the specified area so that they will change over time according to a selected curve.

① In “Track Select,” specify the track whose velocity will be modified.

② Select “Modify Velocity” to access the dialog box.



③ Specify the range in which note velocity will be modified. “From Measure” and “To Measure” specify the measure, and “Beat.Tick” specify the beat and clock. (By default, “From Measure” and “To Measure” will be set to the range that you specified in the Track Edit page.)

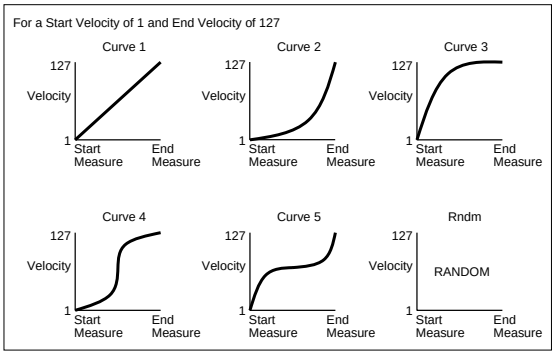
④ Specify the range of notes that will be affected by the Modify Velocity command. Note Range “Btm (Bottom)” is the lower limit, and “Top” is the upper limit. If you wish to edit all notes, set “Btm (Bottom)” to **C–1** and “Top” to **G9**. These settings can also be made by holding down the [ENTER] key as you play a note on the keyboard.

⑤ In “Velocity Start” specify the value at which the velocity data will start, and in “Velocity End” specify the final velocity value. These settings can also be made by holding down the [ENTER] key as you play a note on the keyboard.

⑥ In “Intensity,” specify the degree to which the velocity data will be adjusted toward the curve you specify in ⑦. With a setting of **0** [%], the velocity will not change. With a setting of **100** [%], the velocity will be exactly as described by the curve.

⑦ “Curve”* lets you select from six types of curve to specify how the velocity will change over time.

⑧ To execute the Modify Velocity operation, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
The six curves are as follows.



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Set Song Length

This command changes the length of the specified song. When it is executed, the length of the master track will change, and the number of measures played will change.

① Select “Set Song Length” to access the dialog box.

② In “Length,” specify the length of the song.

③ To execute the Set Song Length command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

Be aware that if you shorten the song, data will also be deleted from the tracks other than the master track.

SEQ 6.1: Arp. (Arpeggiator)

Here you can specify how the arpeggiator will operate in Sequencer mode. These settings can be made for each song. In Sequencer mode (as in Combination mode), you can run the two arpeggiators simultaneously. This allows you to apply different arpeggio patterns to different sounds that have been split across the keyboard, or use velocity to switch between two different arpeggio patterns, etc.
In Sequencer mode, the musical data generated by the arpeggiator during song track or pattern realtime-recording can be recorded. While you record, you can modify the arpeggio pattern and parameters, and adjust the REALTIME CONTROLS C-mode [ARP-GATE] knob and [ARP-VELOCITY] knob etc.

It is not possible to set the tempo of the arpeggiator and the sequencer independently.

When “MIDI Clock” (GLOBAL 2.1–1a) is **Internal**, the arpeggiator can be synchronized to the start timing of the internal sequencer.

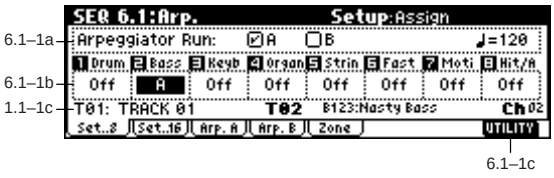
- When you turn on the arpeggiator and press the [START / STOP] key, the arpeggiator will synchronize to the timing of the sequencer.
- When you press the [START / STOP] key, the arpeggiator and sequencer will both stop. If you wish to stop only the arpeggiator, press the [ARP ON / OFF] key.

When the arpeggiator “Key Sync” is off, you can turn on the [ARP ON / OFF] key and play the keyboard to start the arpeggiator running during the pre-count before realtime recording begins, so that the arpeggiator performance will be recorded from the beginning of the pattern at the same time that recording begins. (☞BG p.107)

MIDI When “MIDI Clock” is **External**, the MIDI realtime clock messages transmitted from the external MIDI device connected to MIDI IN connector can perform the same type of control.
Even in this case, you can start / stop using the [START / STOP] key of the TRITON Le’s sequencer.

6.1–1: Set..8 (Setup T01–08)

6.1–2: Set..16 (Setup T09–16)



6.1–1(2)a: Arpeggiator Run, ♩ (Tempo)

Arpeggiator Run A, B (Run A, B)

When the [ARP ON / OFF] key is on, the arpeggiator(s) that are checked here will function for the track(s) to which they are assigned by “Assign.” When the arpeggiator is on, A and B can be turned on / off independently.

♩ (Tempo) **[040...240, (EXT)]**

Specify the tempo of the arpeggiator. Refer to “♩ (Tempo)” (☞1.1–1a).

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6.1–1(2)b: Assign

Assign [Off, A, B]

This assigns arpeggiator A or arpeggiator B to each track 1–8, 9–16. When the [ARP ON / OFF] key is turned on, the arpeggiator specified for each track will run, subject to the "Arpeggiator Run" settings and setting here.

Off: The arpeggiator will not operate.
A: Arpeggiator A will operate. Use the Arp. A page to select the arpeggio pattern and set the parameters.
B: Arpeggiator B will operate. Use the Arp. B page to select the arpeggio pattern and set the parameters.

For tracks that you wish to realtime-record, select either arpeggiator **A** or **B**. If you specify an arpeggiator for two or more tracks, the arpeggiator will play each of the tracks you specify.
You can set **A** and **B** to two different MIDI channels, and control one from the keyboard and the other from an external MIDI device connected to MIDI IN. You can also use multi-track recording (**MultiREC**) to simultaneously record the note data that is generated from the two arpeggiators.

The arpeggiator cannot be triggered by the notes played by the sequencer.

MIDI If the tracks 1–16 assigned to arpeggiators A and B have a "Status" (3.1–1(2)a) of **INT** or **BTH**, they will be played by the note data generated by the arpeggiator. If the "Status" is **BTH**, **EXT**, or **EX2**, MIDI note data will be transmitted on the "MIDI Channel" of each track.

In this case, arpeggiator A or B will be triggered by the "MIDI Channel" of any track 1–16 to which the corresponding arpeggiator is assigned.

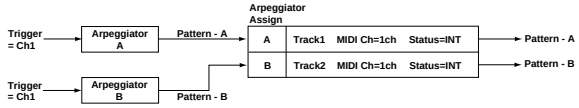
If the ("Local Control On" GLOBAL 2.1–1a) is turned OFF, the arpeggiator will not be triggered by note data from the keyboard. It will be triggered by note data received at MIDI IN. If you wish to record just the trigger notes on an external sequencer and run the TRITON Le's arpeggiator in this way, turn Local Control OFF.

If you want the note data generated by the arpeggiator to be recorded on the external sequencer, turn Local Control ON, and turn off the echo back function of the external sequencer.

MIDI You can control the arpeggiator from an external sequencer, or record arpeggio note data on an external sequencer. (☞p.237)

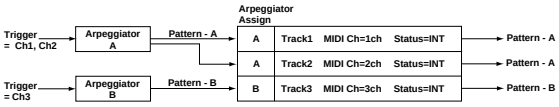
Example 1)
On tracks 1 and 2, set "MIDI Channel" (3.1–1(2)a) to **01** and "Status" (3.1–1(2)a) to **INT**. Assign arpeggiator A to track 1 and arpeggiator B to track 2, and check "Arpeggiator Run A, B" (6.1–1a). In "Track Select" (1.1–1c) choose **Track01**.
With the front panel [ARP ON / OFF] key OFF, play the keyboard and tracks 1 and 2 will sound simultaneously.

When you turn on the front panel [ARP ON / OFF] key and play the keyboard, arpeggiator A will operate for track 1 and arpeggiator B will operate for track 2.



Example 2)
For tracks 1, 2 and 3, set the "MIDI Channel" (3.1–1(2)a) to **01**, **02**, and **03** respectively, and set "Status" (3.1–1(2)a) to **INT**. Assign arpeggiator A to tracks 1 and 2, and arpeggiator B to track 3. Check the "Arpeggiator Run A, B" (6.1–1a) setting.

- In "Track Select," choose **Track01**.
  Playing the keyboard when the front panel [ARP ON / OFF] key is off will play the sound assigned to track 1.
  Playing the keyboard when the front panel [ARP ON / OFF] key is on will cause arpeggiator A to operate for tracks 1 and 2, and produce sound for both tracks.
- In "Track Select," choose **Track02**.
  Playing the keyboard when the front panel [ARP ON / OFF] key is off will play the sound assigned to track 2.
  Playing the keyboard when the front panel [ARP ON / OFF] key is on will cause arpeggiator A to operate for tracks 1 and 2, and produce sound for both tracks.
- In "Track Select," choose **Track03**.
  Playing the keyboard when the front panel [ARP ON / OFF] key is off will play the sound assigned to track 3.
  Playing the keyboard when the front panel [ARP ON / OFF] key is on will cause arpeggiator B to operate for track 3, and play the sound assigned to track 3.
- Alternatively, you could choose **Track01** in "Track Select" to run arpeggiator A for tracks 1 and 2, and use an external MIDI device connected to the TRITON Le's MIDI IN to send note data to MIDI channel 3 to play arpeggiator B.



■ 6.1–1(2)c: UTILITY

☞"Memory Status," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi" (1.1–1d), "Copy Arpeggiator" (COMBI 6.1–1c), "FF / REW Speed ," "Set Location" (1.1–1d)

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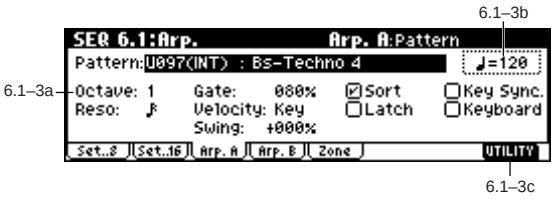
6.1–3: Arp. A (Arpeggiator A)

6.1–4: Arp. B (Arpeggiator B)

Indicates settings for arpeggiator A in the Arp. A page, and for arpeggiator B in the Arp. B page.

note You can use the "Copy Arpeggiator" utility to copy settings from another mode such as Program mode.



6.1–3(4)a: Arpeggiator–A(B) Setup

Pattern	**[P000...P004, U000(INT)...U215(User)]**
Octave	**[1, 2, 3, 4]**
Reso (Resolution)	**[♪₃ , ♪ , ♪₃ , ♪ , ♩₃ , ♩]**
Gate	**[000...100(%), Step]**
Velocity	**[001...127, Key, Step]**
Swing	**[–100...+100(%)]**
Sort	**[Off, On]**
Latch	**[Off, On]**
Key Sync.	**[Off, On]**
Keyboard	**[Off, On]**

These are the arpeggiator parameters for the song. (☞PROG 6.1: Ed–Arp.)

6.1–3(4)b: ♩ (Tempo)

♩ (Tempo) **[040…240, EXT]**

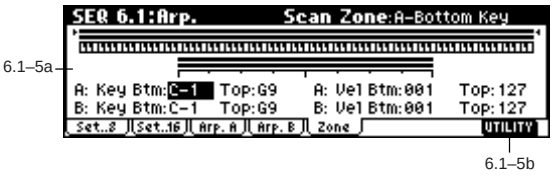
☞ 1.1–1a

■ 6.1–3(4)c: UTILITY

☞"Memory Status," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi" (1.1–1d), "Copy Arpeggiator" (COMBI 6.1–1c), "FF / REW Speed ," "Set Location" (1.1–1d)

6.1–5: Zone (Scan Zone)

Specifies the range of notes and velocities that will trigger each arpeggiator A and B.



6.1–5a: Scan Zone A / B

Zone Map

This shows the "Scan Zone" settings for arpeggiators A and B (☞COMBI 6.1–4a).

A: Key

Btm (A-Bottom Key) **[C–1...G9]**

Top (A-Top Key) **[C–1...G9]**

Specifies the range of notes (keys) that will trigger arpeggiator A. "Top" is the upper limit, and "Btm" is the lower limit.

A: Vel (Velocity)

Btm (A-Bottom Velocity) **[001...127]**

Top (A-Top Velocity) **[001...127]**

Specifies the range of velocities that will trigger arpeggiator A. "Top" is the upper limit, and "Btm" is the lower limit.

B: Key

Btm (B-Bottom Key) **[C–1...G9]**

Top (B-Top Key) **[C–1...G9]**

B: Vel (Velocity)

Btm (B-Bottom Velocity) **[001...127]**

Top (B-Top Velocity) **[001...127]**

Specifies the range of notes (keys) and velocities that will trigger arpeggiator B (☞"A: Key," "A: Vel").

note The value of these parameters can also be input by holding down the [ENTER] key and playing a note on the keyboard.

■ 6.1–5b: UTILITY

☞"Memory Status," "Rename Song," "Delete Song," "Copy From Song," "Copy From Combi" (1.1–1d), "Copy Arpeggiator" (COMBI 6.1–1c), "FF / REW Speed ," "Set Location" (1.1–1d)

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SEQ 7.1: Insert FX

☞For details on insert effects, refer to p.155 “7. Effect Guide.”.

7.1–1: BUS..8 (BUS T01...08)

7.1–2: BUS..16 (BUS T09...16)

Specifies the bus to which the program oscillator(s) of each track 1–8, 9–16 will be sent. You can also set the amount of signal that will be sent to the master effects.

7.1–1(2)a: BUS Select, Send1(MFX1), Send2(MFX2)

BUS Select **[DKit, L/R, IFX, 1, 2, 1/2, Off]**

Specifies the output bus for the program oscillators of tracks 1–8 and 9–16.
The state of the settings can be viewed in the Setup page. (☞COMBI 7.1–1a)

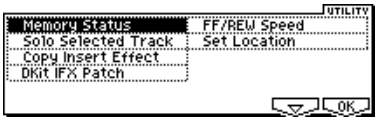
S1 (Send1(MFX1)) **[000...127]**

S2 (Send2(MFX2)) **[000...127]**

Here you can adjust the send levels from tracks 1–8, 9–16 to master effects 1 and 2. This is valid when “BUS Select” is set either to **L/R** or **Off**. If **IFX** is selected, the send level to the master effects 1 and 2 is set by the (“S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” parameters located in the Setup page, after the signal passes through IFX.
These settings have no effect if “BUS Select” is set to **1**, **2** or **1/2**.
The send 1 and 2 settings you make here will be used when the song is played or recorded from the beginning. If you change the settings while recording, the change will be recorded as part of the musical data, and the send amount will change when the data is played back. You can also change these settings during playback. However if send 1 and 2 data has been recorded, the settings will change accordingly.

MIDI If “Status” (3.1–1(2)a) is either **INT** or **BTH**, CC#93 and #91 can be received to control send 1 and 2 respectively and change their settings. When you switch songs or return to the beginning of a song, tracks whose “Status” is **EXT**, **EX2** or **BTH** will transmit these settings via MIDI. This data will be transmitted on the MIDI channel of each track as set by “MIDI Channel” (3.1–1(2)a). The actual send level is determined by summing the value of these parameters with the send level settings of the oscillator(s) of the program used by the track (“S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” PROG 7.1–2a).

■ 7.1–1(2)b: UTILITY



☞“Memory Status,” “Solo Selected Track” (1.1–1d), “DKit IFX Patch” (COMBI 7.1–1b), “FF/REW Speed,” “Set Location” (1.1–1d)

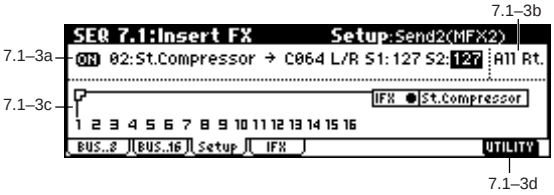
For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

Copy Insert Effect

☞PROG 7.1–1c
However, the MIDI control channel specified in “Control Channel” of the 7.1: Insert FX, Setup page will not be copied.

7.1–3: Setup

Here you can select the type of the insert effects, turn them on/off etc.



7.1–3a: Insert FX Setup

IFX On/Off **[Off, ON]**

Insert Effect **[00...89: name]**

Pan(CC#8) **[L000...C064...R127]**

BUS Select **[L/R, 1, 2, 1/2, Off]**

S1 (Send1(MFX1)) **[000...127]**

S2 (Send2(MFX2)) **[000...127]**

These parameters are the same as in Program mode. (☞PROG 7.1–2)
However, this differs from Program mode in that insert effect dynamic modulation (Dmod) and the “Pan (CC#8),” “Send1(MFX1),” and “Send2(MFX2)” which follow the insert effect are controlled on the MIDI channel specified by “Control Channel” (7.1–1b). The control changes used are the same as in Program mode.
The pan (CC#8) and Send 1 and 2 that you specify here are used when playing or recording from the beginning of the song. If you change these settings while recording, the settings will be recorded as musical data, and during playback, the settings will change accordingly. You can also change these settings during playback. However if Pan (CC#8) and Send 1/2 data has already been recorded, the settings will change according to the recorded data.

MIDI If the “Status” (3.1–1(2)a) is **INT** or **BTH**, receiving CC#8, #93, or #91 will cause the post- insert effect pan and send 1/2 to be controlled, changing the settings. When you change songs or return to the beginning of the song, tracks whose “Status” is **BTH**, **EXT**, or **EX2** will transmit these settings on the MIDI channel specified by “Control Channel.”

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7.1–3b: Control Channel

Control Channel **[Ch01...16, All Rt.]**

MIDI Indicates the MIDI channel that will control effect dynamic modulation (Dmod), pan following the insert effect "Pan (CC#8)," "Send1(MFX1)," and "Send2(MFX2)."

An asterisk "*****" will be displayed at the right of the channel number **Ch01–16** for tracks that are routed to an IFX. If multiple tracks with differing MIDI channel settings are routed, these channels specify the channel that will be used to control the effect.

All Rt. (All Routed): Control can be performed from any of the MIDI channels of the tracks that are routed.

If "BUS Select" (7.1–1(2)a) is set to **DKit** for a track in which a drum program is selected, the MIDI channel of that track will be valid only if this is set to **All Rt.**, regardless of the drum kit "BUS (BUS Select)" (GLOBAL 5.1–3a) setting or the utility setting "DrumKit IFX Patch."

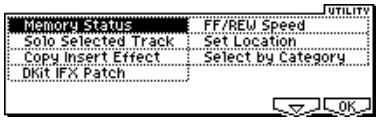
7.1–3c: Routing Map, BUS Select

This displays the settings of the insert effect. The routing, specified effect name, and on / off status of the insert effect are displayed.

T01...16: BUS Sel **[DKit, L/R, IFX, 1, 2, 1/2, Off]**

While viewing the map, you can specify the bus where the program oscillators for each track 1–16 will be sent.
Use the cursor keys to select the track, and use the [INC] / [DEC] keys or the [VALUE] dial to set "BUS Select" (7.1–1(2)a).
This setting can also be made in "BUS Select" (7.1–3a).

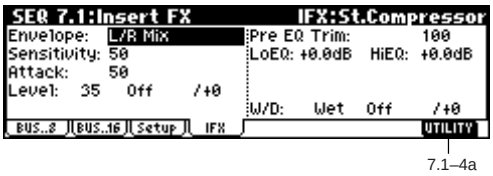
■ 7.1–3d: UTILITY



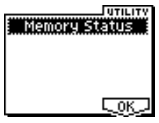
☞"Memory Status," "Solo Selected Track" (1.1–1d), "Copy Insert Effect," (PROG 7.1–1c, 7.1–1b / 2b), "DKit IFX Patch" (COMBI 7.1–1b), "FF / REW Speed," "Set Location" (1.1–1d), "Select by Category" (PROG 7.1–2c)

7.1–4: IFX (Insert Effect)

Sets the parameters for the effects selected for IFX in the Setup page (☞p.164–).



■ 7.1–4a: UTILITY



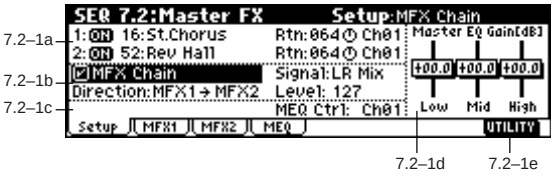
☞"Memory Status" (1.1–1d)

SEQ 7.2: Master FX

☞For details on the master effects, refer to p.155 "7. Effect Guide."

7.2–1: Setup

Here you can select the type of master effects, turn them on / off, and make chain and master EQ settings.
This is the same as Program mode with the exception of "MFX1 Control Ch," "MFX2 Control Ch," and "MEQ Control Ch." (☞PROG 7.2: Ed-MasterFX)



7.2–1a: Master FX Setup

MFX1 On / Off, MFX2 On / Off **[Off, ON]**

Master Effect 1, 2 **[00...89: name]**

Rtn 1, 2 (Return 1, 2) **[000...127]**

This is the same as in Program mode. Refer to "PROG 7.2–1: Setup." However, unlike Program mode, the master effects will be controlled by the MIDI channel specified by "MFX 1, 2 Control Ch." The control changes used are the same as in Program mode.

MFX1, 2 Control Ch **[Ch01...16, G ch]**

MIDI Specifies the MIDI channel that will control dynamic modulation (Dmod) for the master effects.

G ch: The effect will be controlled on the global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a).

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7.2–1b: Master FX Chain

MFX Chain **[Off, On]**

Direction (Chain Direction)
[MFX1→MFX2, MFX2→MFX1]

Signal (Chain Signal) **[LR Mix, L Only, R Only]**

Level (Chain Level) **[000...127]**

This is the same as in Program mode. Refer to "PROG 7.2–1: Setup."

7.2–1c: MEQ Ctrl

MEQ Ctrl (MEQ Control Ch) **[Ch01...16, G ch]**

MIDI Specifies the MIDI channel that will control dynamic modulation (Dmod) for the master EQ.

G ch: The effect will be controlled on the global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a).

7.2–1d: Master EQ Gain [dB]

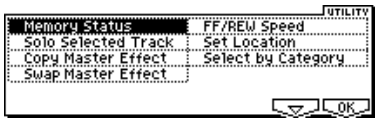
Low **[–18.0...+18.0]**

Mid **[–18.0...+18.0]**

High **[–18.0...+18.0]**

This is the same as in Program mode. (☞PROG 7.2–1: Setup)

■ 7.2–1e: UTILITY



☞"Memory Status," "Solo Selected Track," "FF/REW Speed," "Set Location" (1.1–1d), "Select by Category" (PROG 7.2–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Copy Master Effect

☞p.28 PROG 7.2–1d
Note, the MIDI control channel specified in "Control Channel" of the MFX 1 and 2 pages will not be copied.

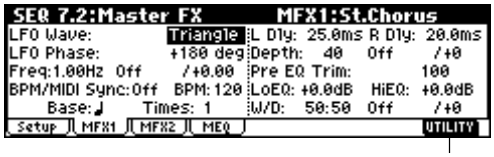
Swap Master Effect

☞p.29 PROG 7.2–1d
Note, the MIDI control channel specified in "Control Channel" of the MFX 1 and 2 pages will not be swapped.

7.2–2: MFX1 (Master Effect1)

7.2–3: MFX2 (Master Effect2)

Here you can set the parameters of the "Master Effect1" and "Master Effect2" effects that were selected in the Setup page (☞p.164–).



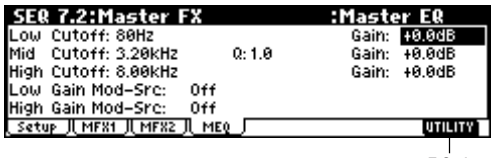
7.2–2a

■ 7.2–2(3)a: UTILITY

☞"Memory Status" (1.1–1d)

7.2–4: MEQ (Master EQ)

The master EQ is a three-band stereo EQ. It is used to perform overall equalizing (tonal adjustment) on the sound from the L/R bus immediately before it is output to AUDIO OUTPUT (MAIN OUT) L/MONO and R (☞p.209).



7.2–4a

■ 7.2–4a: UTILITY

☞"Memory Status" (1.1–1d)

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4. Sampling mode

If the EXB-SMPL option (sold separately) is installed in the TRITON Le, you will be able to use Sampling mode to record 48 kHz stereo 16-bit samples. (☞For details on installing an option board, refer to p.253.)

If the EXB-SMPL option is not installed, pressing the [SAMPLING] key will display a message of "No Sampling Upgrade Installed."

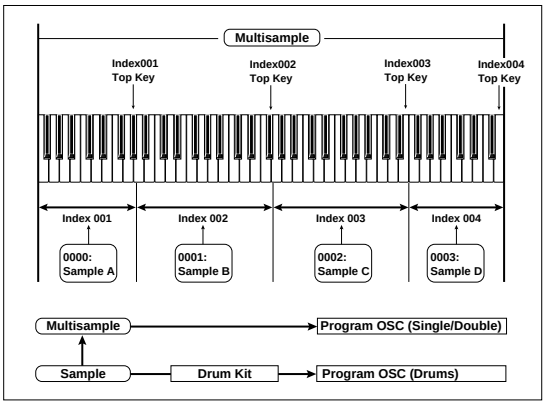
"Sampling" refers to the process of digitally converting an analog signal from a mic or audio device connected to the AUDIO INPUT jack, and recording it into internal memory. You can also apply the insert effect to the analog audio signal while it is being sampled.

If the sample data RAM (16 Mbyte SIMM memory) included with the EXB-SMPL is installed, you will be able to sample approximately 2 minutes 54 seconds in monaural, or approximately 1 minute 27 seconds in stereo. By installing additional 72-pin SIMM boards you can expand the memory to a maximum of 64 Mbytes (two 32 Mbyte SIMM units). In this case, you will be able to record up to four samples that are each approximately 2 minutes 54 seconds long for monaural (or approximately 1 minute 17 seconds for stereo), for a total of approximately 11 minutes 39 seconds of sampling (total of approximately 5 minutes 49 seconds for stereo). (☞For details on installing compatible 72-pin SIMM boards, refer to p.253.)

In Sampling mode, samples that have been sampled or loaded from storage media can be assigned to an index (zone) to create a multisample. One multisample can contain many indexes.

A multisample can easily be converted into a program (☞"Conv. To Prog" 1.1–3f). Once the multisample is converted it can be played and programmed like any other program sound. This program can also be used in Combination or Sequencer mode.

Samples can also be used as drum samples in a drum kit.



note In any page, the selected multisample or sample will sound when you play the keyboard, letting you hear the results of your editing in that page.

When you turn off the power, all multisample and sample data in Sampling mode will be lost. Before you turn off the power, any data you want to keep must be saved on Smart Media or an external SCSI device (if the EXB-SMPL option is installed) (☞p.149). Immediately after the power is turned on, internal memory will not contain sample data, so you will need to load the previously-saved data in order to play or edit it.

There is no Compare function that allows you to restore edited data to the state before it was edited. If you wish to preserve the unedited state of the data, use "Copy MS" or "Copy SMPL" (1.1–3f) etc. to make a copy of the multisample or sample before you begin editing.
For some of the utility menu commands in 2.1: Sample Edit or 3.1: Loop Edit, executing the command **without checking** "Overwrite" in the dialog box allows you to save the unedited sample data while you edit. (☞2.1–2e: UTILITY "About Overwrite")

When executing a sample edit operation or when you finish recording a stereo sample, you may hear a slight noise. This does not affect the audio data that has been edited or sampled.

Cautions regarding sample data

- The sample data memory areas Bank 1–4 each contain 16 MB. Of this 16 MB (8,388,608 samples), sixteen samples (the first and last eight samples) are used as internal work area.
- The first and last samples of each sample are used as internal work area. These two samples are added automatically when a sample is recorded or when an .AIFF or .WAVE file is loaded. This means that if you record a sample of one second, this will result in 48,000 samples of data, but four samples will be added to this, so that sampling memory will actually contain 48,004 samples of data.

How the [AUDITION] key and [START/STOP] key will function in Sampling mode

[START/STOP] key

- Sampling (sample recording) can be performed in any page 1.1–7.1 of Sampling mode by using the [REC/WRITE] and [START/STOP] keys (For the sampling procedure, refer to BG p.34).
  Recording settings such as the input level can be made in SMPL 1.1–3: Recording Input/Pref page, and these settings are also valid in the other pages.
- In the 2.1: Sample Edit2 page, pressing the [START/STOP] key will play the sample of the selected "Index" from "S (Edit Range Start)" to "E (Edit Range End)" in one-shot mode. At this time, the sample will sound at the pitch of the base key.

[AUDITION] key

- The sample of the currently selected "Index" will be played at the pitch of the currently selected key (the key displayed in gray in "Keyboard & Index": 1.1–1a) as long as you hold down the [AUDITION] key.
- In the Slice Sample dialog box of Utility "Time Slice" (3.1–2e) and in the Stretch Sample dialog box of Utility "Time Stretch" (3.1–2e), the sample of the currently selected "Index" will be played at the original key as long as you hold down the [AUDITION] key.

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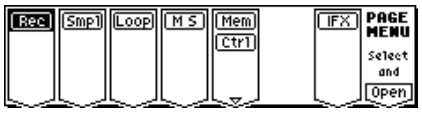
SMPL PAGE MENU

For details on selecting pages in Sampling mode, refer to p.1.



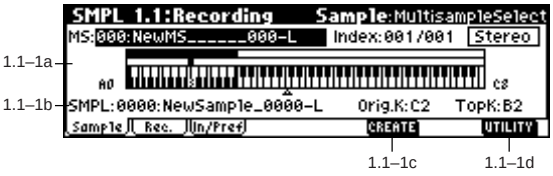
Rec	1.1: Recording	Record samples. Select the sample or multisample to record, and make various recording settings and AUDIO INPUT settings. (☞p.88)
Smpl	2.1: Sample Edit	Perform waveform editing and other editing on recorded samples or samples that were loaded into internal memory in Media mode. (☞p.98)
Loop	3.1: Loop Edit	Set sample playback parameters. Set start, loop start, end address, and turn loop or reverse playback on/off. (☞p.106)
MS	4.1: Multisample	Edit multisamples. Set and edit sample assign, zone, and original key etc. (☞p.116)
Mem	5.1: Memory	View the remaining memory available for multisamples and samples. (☞p.118)
Ctrl	5.2: Controller	Controller settings. (☞p.118)
IFX	7.1: Insert Effect	Select the insert effects used for sampling, and make settings for them. (☞p.119)

SMPL 1.1: Recording

Here you can set the input level and make other basic settings for sampling (sample recording), and make basic settings for multisamples and samples. Normally you will record samples in this page.

1.1–1: Sample

Select the multisample and index sample for sampling, and make basic settings.



1.1–1a: MS (Multisample Select), Index, Keyboard & Index

MS (Multisample Select) [000...999]

Selects the multisample.
Each multisample consists of the samples for one or more indexes (an “index” is a range or zone of keys).
This parameter can also be set from 2.1: Sample Edit–4.1: Multisample.

Here’s how to **create a new multisample**.

① Use numeric keys [0]–[9] to specify the new multisample number, and press the [ENTER] key to open the “Create New Multisample” dialog box.

② If you wish to create a stereo multisample, **check** “Stereo.”

③ To create the multisample, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
A multisample will be created as follows (example).

Mono	001: NewMS_ _ _ _ _ _001
Stereo	001: NewMS_ _ _ _ _ _001-L
	002: NewMS_ _ _ _ _ _001-R

Index [xxx (001...128) / yyy (001...128)]

Select s the index that you wish to sample, or to which you wish to assign a sample.
Each zone within a multisample is called an “index.” For example on the 61-note keyboard, if a multisample is divided into zones of one octave (12 notes), there will be six zones. Each of these zones is called an index, and you can assign a sample to each index.

xxx: The selected index. Choose the desired index.
yyy: The total number of indexes in the multisample.

note To select an index, hold down the [ENTER] key and play a note on the keyboard. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in “Keyboard & Index” (☞“Keyboard & Index”).

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This parameter can also be set in 2.1: Sample Edit–4.1: Multisample. The sampling and editing that you perform in these pages will apply to the index you select here.

When first entering the sample page, this value will be **001/001**. This indicates that only one index exists. To increase the number of indexes, use “CREATE” in this page. When you press the [F6] (“CREATE”) key, indexes will automatically be added from the left-most zone, as **002/002**, **003/003**, ... The position, zone width, and original key location of the index that is created when you press the [F6] (“CREATE”) key can be set in “Create(Create Zone Preference)” (1.1–3b, 4.1–3a). You are also free to modify the zone width and original key location later.

Stereo

A “Stereo” indication will appear at the top right of LCD display if you have selected a stereo multisample or sample, or if you recorded a sample with “Mode (Sample Mode)” (1.1–2a) set to **Stereo**.

About stereo multisamples and stereo samples

Stereo multisamples: Under the following conditions, two multisamples will be handled as a stereo multisample.

- If you checked “Stereo” when creating a new multisample (i.e., selected a new multisample in “MS” 1.1–1a)
- If you executed the Utility “MS To Stereo” (1.1–3f)
- If you sampled with “Mode (Sample Mode)” (1.1–2a) set to **Stereo**

In these cases, a stereo multisample that meets the following conditions will be created automatically.

1. The last two characters of the two multisample names will be -L and -R respectively, and the earlier portion of the names are identical.

2. The two multisamples will have the same number of indexes, and their zone settings are identical.

Stereo samples: Under the following condition, two samples will be handled as a stereo sample.

- When the samples were recorded with a “Mode (Sample Mode)” (1.1–2a) setting of **Stereo**.
- If you executed the Utility “SMPL To Stereo” (1.1–3f)

In this case, a stereo sample that meets the following conditions will be created automatically.

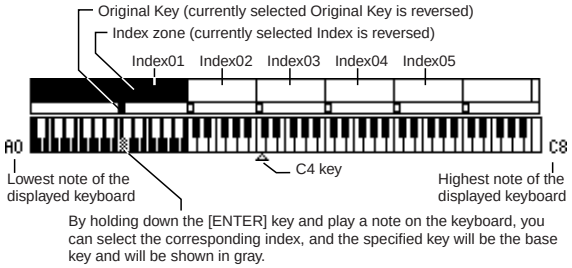
1. The last two characters of the sample name will be -L and -R respectively, and the earlier portion of the names are identical.

2. Two samples that satisfy condition 1. for stereo multisamples are selected.

Stereo multisamples and samples are distinguished internally by their multisample name or sample name. If you use Utility “Rename MS” or “Rename SMPL” (1.1–3f) etc. to modify the multisample name or sample name, please pay attention to the above conditions.

As a condition of a stereo sample, the sampling rates must be identical. You can verify the sampling rate of a sample by using the Utility “Rate Convert” (2.1–2e). Be aware that if you use Utility “Rate Convert” to convert the -L and -R samples to differing sampling rates, they will not be handled as a stereo sample.

Keyboard & Index



This shows the zones and original key locations of the currently selected multisample. The white triangle indicates the C4 key. The note numbers at left and right are the range of notes displayed.

note The key displayed in gray is called the base key, and functions as follows.

- In the 2.1: Sample Edit2 page, pressing the [START / STOP] key will play the sample of the selected “Index” from “S (Edit Range Start)” to “E (Edit Range End)” in one-shot mode. At this time, the sample will sound at the pitch of the base key. In pages other than the 2.1: Sample Edit2 page, the sample of the currently selected “Index” will continue playing at the pitch of the base key as long as you hold down the [AUDITION] key.
- The grid display in 2.1: Sample Edit and the 3.1: Loop Edit Edit2 page is displayed relative to the playback pitch at the base key and the specified tempo BPM / resolution (set in the “Grid” utility).
- The Utility “Pitch BPM Adj.” (4.1–3b) function is relative to the playback pitch of the base key.

You can use Utility “Keyboard Disp.” (1.1–3f) to change the displayed range of the keyboard.

1.1–1b: SMPL, Orig.K, TopK

Here you can set the sample, original key, and range of the selected index.

SMPL (Sample Select)

[----: ---No Assign----, 0000...3999]

Select a sample that you either sampled or that you loaded in Media mode, and play a note within the index range to play that sample.
This parameter can also be set in 2.1: Sample Edit–4.1: Multisample. The sampling and editing operations that you perform in these pages will affect the sample you select here.

----: ---No Assign----: No sample is assigned to the index. There will be no sound when you play the keyboard.
To record a sample, select a vacant sample such as **0000:**. When you record a sample, data will be loaded into the selected sample.
The sample name (such as NewSample_0000) will be shown beside the number. This sample name can be modified using the Utility “Rename SMPL” (1.1–3f).
You can also record a sample even when **----:---No Assign----** is displayed. In this case, a sample number will be selected automatically.
Even if you record to a sample that already contains data, the selected sample will not be overwritten –the data will automatically be sampled to a vacant sample number, and the newly recorded sample will replace the previous sample in the index. If you wish to delete a sample, execute the Utility “Delete SMPL” (1.1–3f).

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Orig.K (Original Key) [C–1...G9]

Specifies the key that will play the sample at its original pitch (i.e., the pitch at which it was recorded). The pitch will change in semitone steps relative to the original key.

For example, suppose that you recorded a sample with "Orig.K" of **F2**. When the zone of the index is C2–B2, pressing the F2 key would playback the sample at its original pitch. Pressing F#2 would playback the sample a semitone higher. Pressing E2 would playback the sample a semitone lower. The pitch of this sampled sound will change in semitone steps between C2 and B2, centered at F2.
The original key location can also be viewed in "Keyboard & Index."

If "Constant Pitch" (4.1–2a) is **checked**, the sample will be sounded at its original pitch by all notes in the zone.

TopK (Top Key) [C–1...G9]

Specifies the highest key in the zone of the index. The zone is defined by this "TopK."

For example, suppose that you set a "TopK" of **B2** for index 001/002, and a "TopK" of **B3** for index 002/002. This means that the zone of index 001 will be B2 and lower, and the zone of index 002 will be C3–B3.

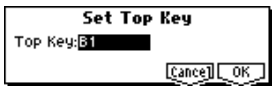
■ 1.1–1c: CREATE

Here you can create an index. Use this when you wish to add a sample to a multisample.
When you press the [F6] ("**CREATE**") key, a new index will be created according to the settings of the Create (Create Zone Preference) (1.1–3b, 4.1–3a) parameters "Pstn (Position)," "Range (Zone Range)," and "Orig.K (Origiral Key Position)."
If you wish to delete an existing index or to exchange indices, use 4.1: Multisample.

note "CREATE" will be displayed if the 1.1: Recording, Sample page or the 4.1: Multisample, Edit1, Edit2 pages are selected.

If when you execute "CREATE" (1.1–1c, 4.1–1c) or "INSERT" (4.1–1c) it is not possible to create a new index according to your Create (Create Zone Preference) settings, one of the following dialog boxes will appear. If you wish to create a new index, perform the following procedure.

- **Set Top Key:** Select "Index" **001**, set "Pstn (Position)" (1.1–3b, 4.1–3a) to **L** (Left), and execute "CREATE" or "INSERT" to open the dialog box. So that a new index can be created at the left of index 001, reset the "Top Key" setting, and press the [F8] ("OK") key.



- **Set Zone Range:** If you execute "CREATE" when it is not possible to create a new index according to the Create (Create Zone Preference) settings, the following dialog box will appear. This dialog box will also appear if you execute "INSERT" when it is not possible to create a new index with the contents of the "CUT" or "COPY" (4.1–1c). Reset the "Range (Zone Range)" (1.1–3b, 4.1–3a), and press the [F8] ("OK") key.

■ 1.1–1d: UTILITY

☞"Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo / MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1–3f)

1.1–2: Rec. (Recording)

1.1–2a: Sample Setup

Here you can select the memory bank into which you will sample, specify the sampling time, and select either mono or stereo sampling.

Time (Sample Time)

Specifies the time that you wish to sample. This can be set in 0.001 second increments. Immediately after the power is turned on, this will show the remaining memory (available sampling time) of the selected memory bank. If you record a sample in this condition ("**REC**"→"**START**"→"**STOP**"), the change in time will be displayed automatically.
If the installed sample data RAM has enough free space, it is a good idea to set "Time (Sample Time)" to a larger setting than necessary, and then after sampling, use the "Truncate" utility (2.1–2a, 3.1–2e) to delete unneeded regions so that the sample does not occupy any more memory than necessary. You can also press the [START / STOP] key to stop recording after you have recorded the desired material (☞ For details on the sampling procedure, refer to BG p.34).

The remaining amount of memory will depend on the following conditions.

1. The amount of memory that is installed.
2. Whether the sample is stereo or mono. When the "Mode (Sample Mode)" (1.1–2a) is set to **Stereo**, the memory capacity will be halved.
3. The time specified for "Pre Trigger" (1.1–2b: a function that automatically samples the sound even before you begin sampling) will be subtracted from the amount of memory that actually remains.

Bank (RAM Bank) [1...4]

This selects the memory bank that will be used for sampling. The sample data RAM is divided into four 16 Mbyte banks. You can expand the sample data RAM to a maximum of 64 Mbytes (two 32 Mbyte SIMM modules). (☞p.256)
The banks that can be selected will depend on the sample data RAM that is installed, as follows.

Installed SIMM boards and available banks

SIMM Slot No.	SIMM	Bank (RAM Bank)
Slot1	16 Mbyte	1
	32Mbyte	1, 2
Slot2	16Mbyte	3
	32Mbyte	3, 4

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For example if the 16 Mbyte SIMM (sample data RAM) included with the EXB-SMPL option (sold separately) is installed in slot 1 and you install 32 Mbytes in slot 2, you will be able to select "Bank (RAM Bank)" **1** (16 Mbyte), **3** (16 Mbyte), and **4** (16 Mbyte). Each bank is a 16 Mbyte unit. (If you install a 32 Mbyte SIMM in slot 1 and slot 2, all banks can be selected, and the total capacity will be 64 Mbytes.)

Mode (Sample Mode) [L-Mono, R-Mono, Stereo]

Select s the channel(s) to be sampled, to specify whether a mono or a stereo sample will be recorded.
Depending on the "Input1, Input2" (1.1–3a) settings, the external source from the AUDIO INPUT 1 and 2 jacks will be sent, either as direct sound without being routed through an effect, or as effect-processed sound routed through an insertion effect, to the L / R bus and sampled from the internal L and R channels.

L-Mono: The sound of the internal L channel will be sampled in mono.
R-Mono: The sound of the internal R channel will be sampled in mono.
Stereo: The sound of the internal L and R channels will be sampled in stereo. When you sample in stereo, a stereo multisample or sample will be created.

Example 1:
Sampling a monaural source connected to AUDIO INPUT 1 without applying internal effects

Input1 "Lvl (Level)"	(1.1–3a)	**127**
Input1 "Pan"	(1.1–3a)	**L000**
Input1 "BUS (BUS(IFX)Select)"	(1.1–3a)	**L/R**
"Recording Level"	(1.1–2c, 1.1–3e)	**as appropriate**
"Mode (Sample Mode)"	(1.1–2a)	**L-Mono**

Example 2:
A monaural source connected to AUDIO INPUT 1 routed through the internal insertion effect IFX 52: Rev Hall, and sampled in stereo

Input1 "Lvl (Level)"	(1.1–3a)	**127**
Input1 "Pan"	(1.1–3a)	**C064**
Input1 "BUS (BUS(IFX)Select)"	(1.1–3a)	**IFX**
IFX	select (7.1) **52: Reverb Hall** and make settings	
"Recording Level"	(1.1–2c, 1.1–3e)	**as appropriate**
"Mode (Sample Mode)"	(1.1–2a)	**Stereo**

Example 3:
A stereo source connected to AUDIO INPUT 1 and 2, and sampling without applying internal effects

Input1 "Lvl (Level)"	(1.1–3a)	**127**
Input1 "Pan"	(1.1–3a)	**L000**
Input1 "BUS (BUS(IFX)Select)"	(1.1–3a)	**L/R**
Input2 "Lvl (Level)"	(1.1–3a)	**127**
Input2 "Pan"	(1.1–3a)	**R127**
Input2 "BUS (BUS(IFX)Select)"	(1.1–3a)	**L/R**
"Recording Level"	(1.1–2c, 1.1–3e)	**as appropriate**
"Mode (Sample Mode)"	(1.1–2a)	**Stereo**

Example 4:
A stereo source connected to AUDIO INPUT 1 and 2, routed through internal insertion effect IFX 08: St.Graphic 7EQ, and sampled in stereo

Input1 "Lvl (Level)"	(1.1–3a)	**127**
Input1 "Pan"	(1.1–3a)	**L000**
Input1 "BUS (BUS(IFX)Select)"	(1.1–3a)	**IFX**
Input2 "Lvl (Level)"	(1.1–3a)	**127**
Input2 "Pan"	(1.1–3a)	**R127**
Input2 "BUS (BUS(IFX)Select)"	(1.1–3a)	**IFX**
IFX	select (7.1) **08: St.Graphic 7EQ** and make settings	
"Recording Level"	(1.1–2c, 1.1–3e)	**as appropriate**
"Mode (Sample Mode)"	(1.1–2a)	**Stereo**

When you finish recording a stereo sample, you may hear a slight noise. This does not affect the audio data that has been sampled.

1.1–2b: REC Setup

Mode (REC Mode) [Manual, Auto]

Select s the method by which sampling will be started.

Manual: Sampling will start when you press the [START / STOP] key from the sampling standby condition.

① Press the [REC / WRITE] key to enter sampling standby mode.

② Use the "Recording Level" (1.1–2c, 1.1–3e) slider to adjust the sampling level.

Be careful of changes in the monitoring volume level (☞"Recording Level").

③ Sampling will begin when you press the [START / STOP] key. If you use the "Count Down" function, pressing the [START / STOP] key will cause sampling to begin after the metronome sounds a count-down.

④ To stop sampling, press the [START / STOP] key once again. Sampling will end automatically if you continue sampling to the end of the "Time (Sample Time)" (1.1–2a).

Auto: Sampling will begin automatically when the input level exceeds the "Threshold" setting.

① Perform steps ① and ② described above.

② Adjust the "Threshold" setting. The black triangles at both sides of the "Recording Level" level bar display will indicate the "Threshold" level. Normally, this should be set as low as possible without allowing noise to trigger sampling.

③ Press the [START / STOP] key.
Sampling will automatically begin when the input level exceeds the "Threshold" setting.

④ When you are finished sampling, perform step ④ of the **Manual** procedure.

Threshold [–63dB...0dB]

When performing auto sampling ("Mode (REC Mode)" **Auto**), this sets the level at which sampling will begin (☞"Mode (REC Mode)" **Auto**, step ②).

note This will not be displayed if "Mode (REC Mode)" is set to **Manual**.

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Count Down (Count Down REC) [Off, 4, 8, 3, 6]

When you begin sampling with "Mode (REC Mode)" set to Manual, this parameter specifies whether there will be a count-down before sampling begins.

Off: When you press the [START/STOP] key from sampling standby mode, sampling will begin immediately.
4, **8**, **3**, **6**: When you press the [START/STOP] key from sampling standby mode, sampling will begin after a count-down of the specified length, based on the tempo of "♩ (Tempo)." If you specify **4**, the count will be 4-3-2-1-0, and sampling will begin on the count of 0.

note This will not be displayed if "Mode" is set to **Auto**.

♩ (Tempo) [040...240]

This sets the tempo of the count-down when "Count Down" is used.
The tempo specified here will also be used when the LFO or delay time of the insert effect is controlled by the BPM/MIDI SYNC function during sampling (☞p.219). This can also be set by the REALTIME CONTROLS C-mode [TEMPO] knob.

Pre Trigger (Pre Trigger REC) [000...500ms]

When sampling the sound that occurs before sampling is actually triggered, this setting specifies the time length that will be "pre-sampled."
When sampling in auto mode ("Mode (REC Mode)" **Auto**), sampling will begin when the input signal exceeds the specified threshold level "Threshold." However depending on the "Threshold" settings, the early portion of the attack sound may be lost, and in such cases you can use "Pre Trigger."
Also, when sampling manually ("Mode (REC Mode)" **Manual**) and using "Count Down," you may intend to play your instrument etc. at precisely the downbeat but actually be slightly ahead of the beat. In such cases, you can use Pre Trigger REC to sample without loosing the beginning of the note.

If you increase this value, you will always be sampling more than you need. Normally you should leave this set at **000ms**, and set it to a minimal value only when necessary.

1.1–2c: Recording Level

Recording Level [–inf, –72.0... 0.0...+18.0dB]

Adjust the final level of the signal that will be sampled.

note This can also be set in the Input/Pref page.

When you press the [REC/WRITE] key you will enter sampling standby mode, and you will be able to adjust the signal level.
Initially you should set this to **0.0**, and make adjustments so that the level of the bar is as high as possible without exceeding 0 dB. If 0 dB is exceeded, "CLIP!" will be displayed. This indicates that the sampling signal level is excessive. Adjust the level so that "CLIP!" does not appear.

note In order to sample with the maximum dynamic range, use the [LEVEL] knob to adjust the level as high as possible without making "ADC OVER!" appear. Then set "Lvl" (Input/Pref page) to **127**, and adjust "Recording Level" (Recording page, Input/Pref page) as high as possible without making the "CLIP!" indication appear.

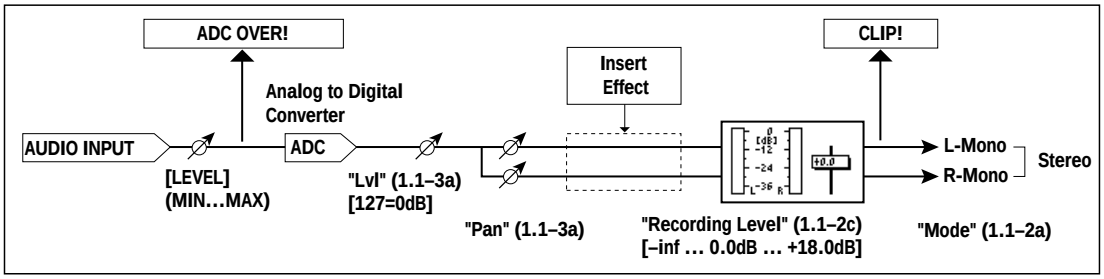
In the sampling standby mode after you press the [REC/WRITE] key, the sound that is output from the AUDIO OUTPUT L/MONO, R and from the headphones will be adjusted by the "Recording Level," but when you cancel sampling standby or cancel sampling, the sound will be output at the **0 dB** level. If you have lowered the "Recording Level" below **0 dB**, please be careful of sudden changes in volume.

If the sound is still distorted even if you lower the "Recording Level," it is possible that distortion is occurring in the input stage of the AUDIO INPUT, or that distortion is being caused by the settings of the internal effect.

Excessive signal levels in the input stage of the AUDIO INPUT can be verified in the Recording page, Input/Pref page. If an indication of "ADC OVER!" appears above the "Recording Level" bar display, the distortion is due to excessive levels in the input stage of the AUDIO INPUT. Adjust the [LEVEL] knob until the "ADC OVER!" display no longer appears.
(see diagram below)

If there is still distortion even after [LEVEL] has been lowered, it is possible that the distortion is being caused by the settings of the internal effect. Lower the Input 1, 2 "Lvl" (Input/Pref page), or adjust the effect settings.
(see diagram below)

note If you have sampled at a low input level, you can execute **Normalize** in Utility "Norm./Level Adj." (2.1–2e) to amplify the level to the maximum possible without clipping.



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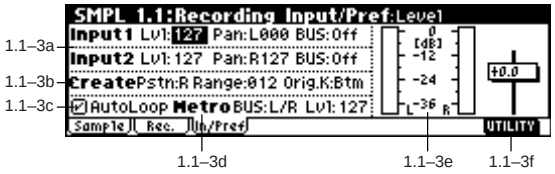
■ 1.1–2d: UTILITY

☞"Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo / MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1–3f)

1.1–3: In / Pref (Input / Preference)

Specify the input level from the rear panel AUDIO INPUT 1, 2, and set pan and bus. You can also set other setup parameters.



1.1–3a: Input1, Input2

Here you can make adjustments for the input stage of the audio signal received at AUDIO INPUT 1 and 2.

These settings are valid only in Sampling mode. These settings will also be valid when you move from Sampling mode to Global mode.

In modes other than Sampling mode, settings for Audio Input 1 and 2 are made in "Audio In (Setup for COMBI, PROG, SEQ)" (GLOBAL 1.1: System, Audio In).

Lvl (Level) [000...127]

Specifies the level of the signal immediately after the analog audio signal from AUDIO INPUT 1 and 2 is converted into a digital signal. Normally you will set this to **127**.
If you hear distortion even after lowering this level, it is possible that the distortion is occurring before the A / D converter. Adjust the [LEVEL] knob or the output level of your external sound source so that the "ADC OVER!" indication above the "Recording Level" display does not appear.

Pan [L000...C064...R127]

Sets the panning of the analog audio signal from AUDIO INPUT 1 and 2. Normally you will set Input 1 to **L000** and Input 2 to **R127**. This allows you to sample a stereo audio source in stereo (☞For example settings, p.91, BG p.85).

BUS (BUS(IFX) Select) [L / R, IFX, Off]

Select s the bus.

L/R: Select this when you wish to sample the incoming analog audio signal without applying an insert effect. Normally you will select **L/R**.
IFX: Select this when you want to apply the insert effect to the analog audio input signal while it is being sampled. (☞p.158)
Off: The analog audio signal will not be input.

1.1–3b: Create (Create Zone Preference)

These settings determine the initial state of the indexes that are created when you press the [F6] ("CREATE") key (1.1–1c, 4.1–1c). Each new index will be created according to the settings you make here, but you are free to modify the settings later.

Pstn (Position) [R, L]

Specifies whether the new index will be created at the right or left of the selected index.

R (Right): The new index will be created at the right of the currently selected index.
L (Left): The new index will be created at the left of the currently selected index.

Range (Zone Range) [001...127]

Specifies the key range of the zone of the newly created index.

001: A single note of the keyboard will be the index. The sample of the index will sound at its original key when you play that note. This setting can be used similarly to pad (keyboard) type samplers.
002...127: The sample will change pitch in semitone steps across the specified number of keys, centered on the original key "Orig.K" (1.1–1b, 4.1–1b). If "Constant Pitch" (4.1–2a) is **checked**, the pitch will not change.

Orig.K (Original Key Position) [Btm, Cntr, Top]

Specifies where the original key will be located in the zone (specified by "Zone Range") for a newly created index.

Btm (Bottom): The lowest key in the zone will be the original key.
Cntr (Center): The middle key in the zone will be the original key.
Top: The top key in the zone will be the original key.

1.1–3c: Auto Loop

Auto Loop (Auto Loop On) [Off, On]

On (checked): The recorded sample will automatically be played with looping turned on (☞"3.1: Loop Edit").

1.1–3d: Metro (Count Down REC Metronome)

BUS (Metronome BUS) [L / R, 1, 2]

Specifies the output destination of the metronome sound played by "Count Down" (1.1–2b).

L/R: The metronome will be output from OUTPUT (MAIN) L / MONO, R, and the headphones.
1, 2: The metronome will be output from OUTPUT (INDIVIDUAL) 1 or 2 respectively.

Lvl (Metronome Level) [000...127]

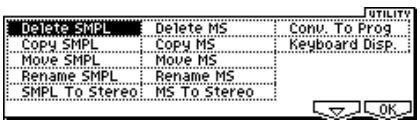
Specifies the level of the metronome sound played by "Count Down."

1.1–3e: Recording Level

[–inf, –72.0... 0.0...+18.0]

Adjusts the signal level at the final stage of sampling (☞1.1–2c).

■ 1.1–3f: UTILITY



For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

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Delete SMPL (Delete Sample)

This command deletes the currently selected sample, or samples that are not mapped to (i.e., used by) any multisample or drum kit, or all samples.

① Select “Delete SMPL” to open the following dialog box.

② Use the [INC], [DEC] keys or the [VALUE] dial to select the sample(s) that you wish to delete.
Selected: The currently selected sample will be deleted. The sample assignment for “Index” (1.1–1a) will change to **---No Assign---**.
Unmapped Samples: Delete all samples that are not mapped to (used by) any multisample or drum kit.
All Samples: All samples in memory will be deleted. The sample assignments of all multisamples will change to **---No Assign---**.

③ To execute the Delete Sample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

If the sample data (waveform data) of the sample you delete is being used by another sample, the sample data itself will not be deleted. Only the sample will be deleted.

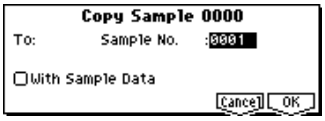
Copy SMPL (Copy Sample)

This command copies the currently selected sample to another sample.

note The sample number of the copy destination will automatically be added to the sample name. If necessary, use “Rename SMPL” (1.1–3f) to rename it. At this time, be careful that the name is not identical to any other sample. (The sample name is used to distinguish stereo samples. ☞p.89)

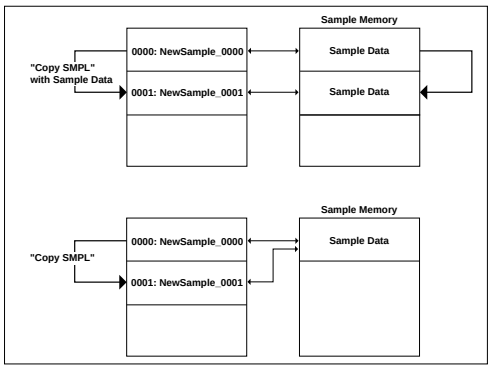
① Use “SMPL” (1.1–1b) to select the copy source sample.

② Select “Copy SMPL” to open the following dialog box.



③ Use “To: Sample No.” to specify the copy destination sample number.
Stereo When copying a stereo sample, specify both the L and R channels for the copy destination sample number.

④ If you **check** “with Sample Data”: Executing the copy will simultaneously copy the sample data (waveform data) as well. The copy source and copy destination samples will exist as completely independent samples. For example, you would use this when you wish to start with the same sample data, and edit it separately in 2.1: Sample Edit to create two or more different types of sample.
If you do **not check** “With Sample Data”: Executing the copy will not copy the sample data (waveform data). The newly created sample will share the sample data of the copy source sample. For example, you would use this when you wish to use 3.1: Loop Edit to create two or more versions of the same sample data with different loop addresses. Sample memory area will not be consumed by this type of copy. If you use 2.1: Sample Edit to edit the sample data, the results will affect all samples that share this sample data.

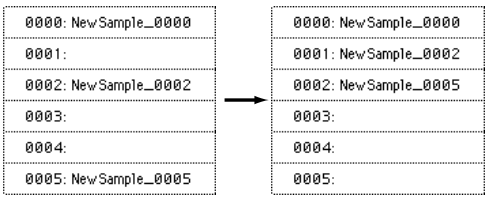


⑤ To execute the Copy Sample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Move SMPL (Move Sample)

This command lets you move the currently selected sample to the specified number (i.e., to change the sample number), or to rearrange the sample numbers so that they start from 0000 after samples have become discontinuous as a result of creating or editing. (☞Following illustration)

When you reassign the sample numbers, the sample numbers within the multisamples and drum kits that use these sample will also be automatically reassigned. (This means that the samples of the multisamples and drum kits need not be reassigned following this operation.)



① Use “SMPL” (1.1–1b) to select the copy source sample.

② Select “Move SMPL” to open the following dialog box.

③ Use “To” to specify the move destination sample number.
Stereo When moving a stereo sample, you must move the samples individually.
If you wish to reassign (pack) all sample numbers starting at 0000, **check** “**Optimize Empty Sample No.**”

④ If “**Adjust Sample Assign in Drum Kit**” is **checked**, and if the samples being moved are mapped to (used by) a drum kit, those sample numbers will also be automatically modified. Normally you will leave this checked.

Samples mapped to (used by) multisamples will be automatically changed to the new sample numbers regardless of this setting.

⑤ To execute the Move Sample operation, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

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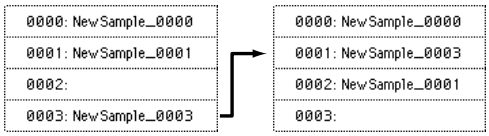
Example)

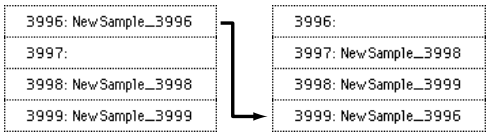
If data already exists at the move destination sample number, the sample will not be overwritten; instead, all subsequent samples will be renumbered upward.



Move 0003 to 0001

Example)

If there is no empty sample number and forward movement is not possible, samples will be renumbered downward.



Move 3996 to 3999

Rename SMPL (Rename Sample)

This command renames the currently selected sample.

① Use “SMPL” (1.1–1b) to select the sample whose name you wish to change.

② Select “Rename SMPL” to open the following dialog box.

③ Press the [F5] (“Name”) key to move to the text dialog box, and input the sample name (maximum of sixteen characters).

Stereo If the multisample is stereo and a stereo sample is selected, you can input up to fourteen characters for the sample name. This is because the last two characters are reserved for -L and -R. If you rename up to fourteen characters of the sample of either the L or the R channel, the other sample will automatically be renamed.

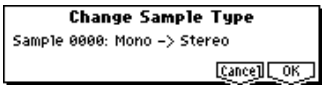
④ To execute the Rename Sample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

SMPL To Stereo (Change Sample Type)

This command changes a mono sample into a stereo sample. This can be executed only if the selected sample is mono.

① Use “SMPL” (1.1–1b) to select the sample that you wish to convert to stereo.

② Select “SMPL To Stereo” to open the following dialog box.



③ To execute the Change Sample Type command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. When you execute this command, the sample type will change as follows.

- The selected sample will become a stereo sample. “–L” will be overwritten into the last two characters of the sample name.
- An identically named sample will be created with “–R” as the last two characters of the sample name.

  Also, if the selected multisample is mono, it will change to stereo.
- The last two characters of the multisample name will be overwritten as “–L”.
- A new multisample will be created with the same name, but whose last two characters are “–R”.
- The stereo sample that was created will be assigned automatically.

Delete MS (Delete Multisample)

This command deletes the currently selected multisample or all multisamples.

① Use “MS” (1.1–1a) to select the multisample that you wish to delete.

② Select “Delete MS” to open the following dialog box.

③ **All Multisamples:** Check this if you wish to delete all multisamples.

④ **Delete Samples too?**: Check this if you wish to simultaneously delete the samples that are included in the multisample being deleted. However, samples that are mapped to (used by) other multisamples or drum kits will not be deleted.

⑤ To execute the Delete Multisample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Even if you also choose to delete the samples that are included in the deleted multisample(s), any sample data (waveform data) used by these samples that is shared with other samples will not be deleted. Only the sample itself will be deleted.

Copy MS (Copy Multisample)

This command copies the selected multisample to another multisample.

note The copy destination multisample number will automatically be included in the multisample name of the copy destination. If necessary, use “Rename MS” (1.1–3f) to rename it. When doing so, make sure that the name is not identical to any other multisample name. (The multisample name is used to distinguish stereo multisamples. ☞p.89)

① Use “MS” (1.1–1a) to select the copy source multisample.

② Select “Copy MS” to open the following dialog box.

③ Use “To: Multisample No.” to specify the copy destination multisample number.

Stereo When copying a stereo multisample, copy both the L and R channels of the copy destination multisample number.

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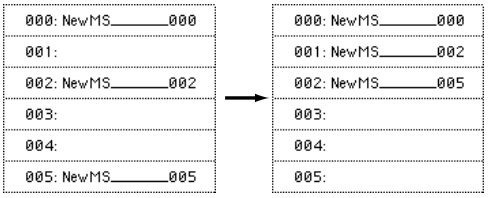
④ To execute the Copy Multisample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. When a multisample is copied, the samples assigned to the multisample will also be copied at the same time. At this time, they will be automatically copied to vacant sample numbers. The sample data (waveform data) will be shared between the copy source and copy destination. (Additional sample memory area will not be consumed.)

Move MS

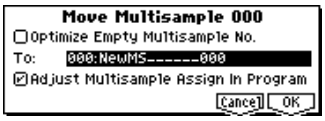
This command lets you move the currently selected multisample to the specified number (i.e., to change the multisample number), or to rearrange the multisample numbers so that they start from 000 after multisamples have become discontinuous as a result of creating or editing. (☞Following illustration)

When you reassign the multisample numbers, the multisample numbers within the programs that use these multisamples will also be automatically reassigned. (This means that you do not need to reselect the multisamples in Program mode following this operation.)



① Use “MS” (1.1–1a) to select the multisample that you wish to move.

② Select “Move MS” to open the following dialog box.



③ In “To,” specify the move destination multisample number.

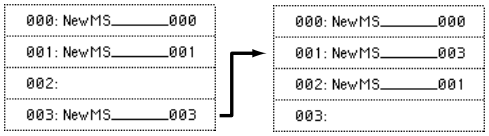
Stereo When moving a stereo multisample, you will need to move each part separately.
If you wish to rearrange all multisamples consecutively, **check** “**Optimize Empty Multisample No**.”

④ If “**Adjust Multisample Assign in Program**” is **checked** and if the multisamples being moved are used in programs, the multisample numbers of the programs will also be reassigned automatically. Normally you will leave this checked.

⑤ To execute the Move Multisample command, click the [F8] (“OK”) key. If you decide not to execute, click the [F7] (“Cancel”) key.

Example)

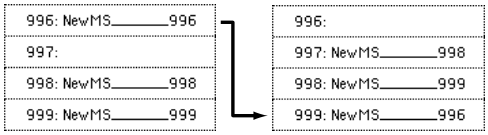
If data already exists at the move destination multisample number, the multisample will not be overwritten; instead, all subsequent multisamples will be renumbered upward.



Move 003 to 001

Example)

If there is no empty multisample number and forward movement is not possible, multisamples will be renumbered downward.



Move 996 to 999

Rename MS (Rename Multisample)

This command modifies the name of the currently selected multisample.

① Use “MS” (1.1–1a) to select the multisample that you wish to rename.

② Select “Rename MS” to open the following dialog box.

③ Press the [F5] (“Name”) key to move to the text dialog box, and input the multisample name (up to sixteen characters).

Stereo If the selected multisample is **stereo**, up to fourteen characters can be input as the multisample name. This is because the last two characters are reserved for -L and -R. If you rename up to fourteen characters of the multisample of either the L or the R channel, the other multisample name will automatically be renamed.

④ To execute the Rename Multisample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

MS To Stereo / MS To Mono (Change Multisample Type)

This command converts a mono multisample to stereo, or a stereo multisample to mono. If the selected multisample is mono, the dialog box will allow you to execute “MS To Stereo.” If the selected multisample is stereo, the dialog box will allow you to execute “MS To Mono.”

① Use “MS” (1.1–1a) to select the multisample that you wish to change to stereo or mono.

② Select either “MS To Stereo” or “MS To Mono” to open the dialog box.

③ To execute the Change Multisample Type command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
When you execute this command, the multisample type and sample assignment will change as follows.

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MS To Stereo

- The selected multisample will be converted to stereo. The last two characters of the multisample name will be overwritten as -L.
- An identical multisample will be newly created, but with the last two characters of the multisample name overwritten as -R.
- Mono samples assigned to the original multisample will be assigned to both -L and -R multisamples.
- If samples assigned to the original multisample are part of a stereo pair of samples, the -L and -R samples will be assigned to the -L and -R multisamples.

Stereo: MS To Mono

- The selected multisample will be converted to mono. The -L or -R at the end of the multisample name will be deleted.
- Multisamples that are stereo pairs of the selected multisample will be deleted.

Conv. To Prog (Convert Multisample To Program)

This command converts the selected multisample into a program.
If you have recorded a sample or created a multisample and would like to play it in Program mode, Combination mode, or Sequencer mode, you must create a program that uses that multisample for its oscillator.
It is possible to set the Program mode OSC1 and OSC2 parameters "High, Low" (PROG 2.1–2b) to select a RAM bank, so that a multisample that you created in Sampling mode can be used in the program, and then to make program settings to specify how the multisample will be sounded.
However by executing this "Conv. To Prog" command, you can quickly and easily convert the Sampling mode settings into the desired program, without having to make Program mode settings as described above.

① Use "MS" (1.1–1a) to select the multisample that you wish to convert to a program.

② Choose "Conv. To Prog" to open the dialog box.

③ Press the [F5] ("Name") key to move to the text dialog box, and input the program name (up to sixteen characters). By default, the multisample name will be specified.

④ If "Use Destination Program Parameters" is **unchecked**: Executing the command will replace the multisample of the convert destination program with the multisample that is selected here, and will initialize the settings of the remaining program parameters. The sound that you hear in Sampling mode will be accurately reproduced by the program.
A monaural multisample will be converted into a program with an "Mode (Oscillator Mode)" (PROG 2.1–1a) of **Single**, and a stereo multisample will be converted into a **Double** program.
If "Use Destination Program Parameters" is **checked**: Executing this command will replace the multisample of the convert destination program with the multisample that is selected here, and will not initialize the settings of the remaining program parameters. Use this setting if you wish to use the parameter settings of a preload program, etc.

If you **check** "Use Destination Program Parameters," be aware of the following points.

- If the selected multisample is mono, the "Mode (Oscillator Mode)" of the convert destination program must be **Single**. Conversely, if the selected multisample is stereo, the "Mode (Oscillator Mode)" of the convert destination program must be **Double**. If you attempt to execute this command when these conditions are not satisfied, a message will indicate "Oscillator Mode conflicts." You will need to change the "Mode (Oscillator Mode)" setting of the convert destination program.
- Stereo If the selected multisample is stereo and the program pan setting "Pan (Amp1 Pan)" is **L000** and "Pan (Amp2 Pan)" is **R127** (PROG 5.1–1b and 5.2–1), the stereo position of the multisample in Sampling mode will be reproduced by the program.

⑤ Use "To" to select the convert destination program. You can use the [BANK] keys, numeric keys [0]–[9], [VALUE] dial, and [INC], [DEC] keys to make your selection.

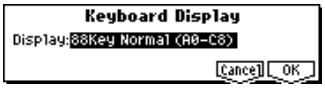
We recommend that you use **bank D064–D127** as the program bank / numbers for Sampling mode programs. Although it is possible to specify any bank A–D as the conversion destination program, the factory-set preloaded programs are located in bank A000–D063.

⑥ To execute the Convert Multisample To Program command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Keyboard Disp. (Keyboard Display)

This command selects the range of the keyboard display. Normally you will select **88Key Normal (A0–C8)**.

① Select "Keyboard Disp." to access the dialog box.



② Use the [INC], [DEC] key to select the displayed range.

③ To execute the Keyboard Display command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

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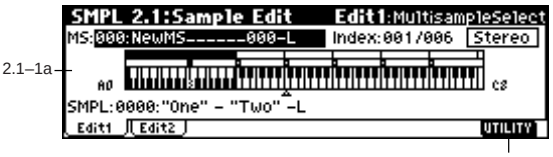
SMPL 2.1: Sample Edit

Here you can edit the sample data (waveform data) that you sampled or loaded in Media mode.
Editing operations such as deleting unwanted portions of the waveform, reversing the waveform, or lowering the sampling frequency can be performed in detail while viewing the “sample waveform display.”

2.1–1: Edit1



2.1–1a: MS, Index, Keyboard & Index, SMPL

MS (Multisample Select) **[000...999]**

Select s the multisample that contains the sample you wish to edit (☞1.1–1a).

Index **[xxx (001...128) / yyy (001...128)]**

Selects the index of the sample you wish to edit. Your editing will affect the sample of the index that you select here, and the waveform will appear in the “sample waveform display”(2.1–2a) (☞1.1–1a).

note To select an index, hold down the [ENTER] key and play a note on the keyboard. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in “Keyboard & Index” (☞“Keyboard & Index” 1.1–1a).

Keyboard & Index

(☞1.1–1a)

SMPL (Sample Select)

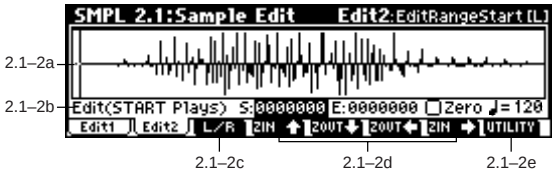
[----: ---No Assign----, 0000...3999]

Selects the sample for the selected index. When you change “SMPL,” the selected sample will be assigned to the specified index. (☞1.1–1b)

■ 2.1–1b: UTILITY

☞“Delete SMPL,” “Copy SMPL,” “Move SMPL,” “Rename SMPL,” “SMPL To Stereo,” “Delete MS,” “Copy MS,” “Move MS,” “Rename MS,” “MS To Stereo / MS To Mono,” “Conv. To Prog,” “Keyboard Disp.” (1.1–3f)

2.1–2: Edit2



2.1–2a: Sample waveform display

Sample waveform display

This displays the waveform of the selected sample. The horizontal axis is the sample address (time axis), and the vertical axis is the sample level.

The bold line in the display indicates the portion of the entire sample waveform that is currently shown in the screen. As you zoom-in on the time axis, you will see that a smaller proportion of the waveform is shown in the screen.

2.1–2b: Edit (Audition Plays), Zero, ♩ (Grid Tempo)

S (Edit Range Start) **[0000000...]**

E (Edit Range End) **[0000000...]**

This specifies the range (start address and end address) of the sample that will be edited by UTILITY menu commands. (This is shown in sample address units.)
The range you specify here will be highlighted in the “sample waveform display.”

note To hear the sound of the specified range, press the [START / STOP] key. The sample will sound from the “S (Edit Range Start)” to the “E (Edit Range End)” points, at the pitch of the base key (displayed in gray). (☞”Keyboard & Index” 1.1–1a)

Zero (Use Zero) **[Off, On]**

On (checked): When setting “S (Edit Range Start)” and “E (Edit Range End),” it will be possible to select these only to locations where the waveform level is ±0 (i.e., where the waveform crosses the center line of the “sample waveform display”). You can use the [VALUE] dial, and [INC], [DEC] keys to automatically search for zero-cross addresses. By using the numeric keys [0]–[9] you can search for the zero-cross address nearest to the value that you input.
Off (unchecked): “S (Edit Range Start)” and “E (Edit Range End)” can be set in increments of one. This is the normal setting.

♩ (Grid Tempo) **[040...480(BPM)]**

(☞3.1–2b)

■ 2.1–2c: L / R

This is valid only if a stereo sample is selected.
This switches the display between the L channel and R channel of a stereo sample.
Each time you press the [F3] (“L / R”) key, the display will alternate between the L channel and the R channel.
The currently-displayed channel of the sample is shown in the upper right of the screen ([L] for the L channel, [R] for the R channel).

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■ 2.1–2d: ZOOM

These buttons let you zoom-in and zoom-out the “sample waveform display” in the horizontal axis (sample addresses) or vertical axis (sample level).

2IN ↑: Press the [F4] key to zoom-in vertically.
2OUT ↓: Press the [F5] key to zoom-out vertically.
2OUT ←: Press the [F6] key to zoom-out horizontally.
2IN →: Press the [F7] key to zoom-in horizontally.

If you continue holding each key, zoom-in / out will occur repeatedly.

By zooming-in on the horizontal direction, you can move from the overall display where the waveform is shown as a solid line (1x magnification) to 2x or 4x magnification. (With 1x magnification, the display resolution of the LCD will be the same as the resolution of the sample addresses. For example if you change the sample address by one, the vertical line in the LCD that indicates the sample address will move in steps of one pixel.) In the vertical axis, you can zoom-in from 1x (full-range display) to 512x.
Zoom-In / zoom-out will occur starting at the “S (Edit Range Start)” or “E (Edit Range End)” points you specify. (If a different parameter is selected when you zoom-in or -out, the zoom-in / out will be based on the last-selected point. If you re-select the “S (Edit Range Start)” or “E (Edit Range End)” points when the display is zoomed in or out, the display range will be adjusted so as to show the selected point.)

If the zoom ratio is low (1x or less), the “sample waveform display” may differ slightly from the displayed waveform before and after waveform editing, but this does not affect the playback sound. If this occurs, raising the zoom ratio will make the display accurate.

■ 2.1–2e: UTILITY

Before using the utility commands “Truncate”–”Volume Ramp” to edit sample waveform data, you must set “S (Edit Range Start”) and “E (Edit Range End)” to specify the range to be edited. Then select the desired utility menu command and execute it.
The various utilities in this page can be selected from the Edit2 page “UTILITY.” (They cannot be selected in the Edit1 page.) For the procedure of selecting a utility command, refer to PROG 1.1–1c: UTILITY.

There is no compare function that lets you return the edited result to the state before editing. If you wish to preserve the unedited sample, **uncheck** the “Overwrite”[*1] item in the dialog box of each UITLITY menu command before you execute.

note For stereo samples, the L channel and R channel samples are edited simultaneously. If you wish to edit only the L channel or R channel, select a mono multisample, and select either the L channel or R channel sample for editing.

note If you “Copy” a mono sample into the buffer, and then “Insert,” “Mix,” or “Paste” it to a stereo sample, the data will be inserted, mixed, or pasted into both the L and R sides. (The result will be that a stereo sample will be created.)
If you “Copy” a stereo sample into the buffer, and then “Insert,” “Mix,” or “Paste” it to a mono sample, the L- and R-side data in the buffer will be mixed to mono, and then inserted, mixed, or pasted. (The result will be that a mono sample will be created.)
You can also use these commands if you wish to mono-mix a stereo sample and use it as a mono sample. However, be aware that once a sample has been mixed to mono, it is no longer possible to return it to a stereo sample.

note The playback “S (Start)” (start address), “LpS (Loop Start)” (loop start address), and “E (End)” (end address) of the sample waveform data are specified in 3.1: Loop Edit, Edit2. If the above parameters are within the range of sample addresses deleted or moved by the editing command, their addresses will automatically be moved.

*1: **About “Overwrite”**
When **“Overwrite” is unchecked**: When the command is executed, the edited sample will be saved in a different sample number. The unedited sample will remain without change.
When **“Overwrite” is checked**: When the command is executed, the edited sample will be overwritten onto the original sample (number). The original sample will be modified.

note Normally, you will leave “Save to No.” at its default setting, and execute without checking “Overwrite.” When you execute, both the data before and after editing will be preserved, and the sample number of the edited data will be assigned as the sample of that index.

“LpS (Loop Start)” and “E (End)” (3.1–2b) must be located at least eight addresses apart. If as a result of executing the Utility “Truncate,” “Cut,” or “Rate Convert” (2.1–2e), the “LpS (Loop Start)” and “E (End)” would be separated by less than eight addresses, the display will indicate “Sample length is shorter than minimum.” Please set the “S (Edit Range Start)” and “E (Edit Range End)” appropriately.

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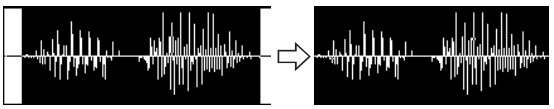
Truncate

This command deletes unwanted data that lies beyond the "S (Edit Range Start)" and "E (Edit Range End)." Use this command when you wish to delete silence at the beginning or end of the waveform data.

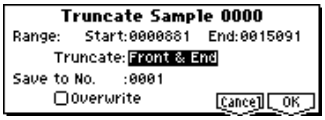
note If you wish to delete unneeded (unplayed) sample data after setting the start address, loop start address, and end address, use the Utility "Truncate" found in 3.1: Loop Edit, Edit2 page.



① Use "SMPL" (2.1–1a) to select the sample that you wish to edit, and use "S (Edit Range Start)" and "E (Edit Range End)" (2.1–2b) to specify the editing range.

note You can press the [START / STOP] key to hear the portion that will be left by the "Truncate" command.

② Select "Truncate" to open the following dialog box.



③ The editing range will be shown in Range "Start" and "End."

④ Use "Truncate" to select the portion that will be deleted.
Front & End: The sample data that lies before the "S (Edit Range Start)" and after the "E (Edit Range End)" will be deleted.
Front: The sample data that lies before the "S (Edit Range Start)" will be deleted.
End: The sample data that lies after the "E (Edit Range End)" will be deleted.

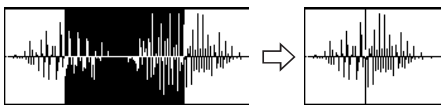
⑤ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.
Stereo For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*": About "Overwrite")

⑦ To execute the Truncate command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Cut

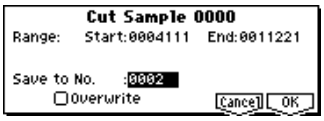
This command deletes the data between the "S (Edit Range Start)" and "E (Edit Range End)." Sample data located after the deleted portion will be moved forward.



① Use "SMPL" (2.1–1a) to select the sample that you wish to edit, and use "S (Edit Range Start)" and "E (Edit Range End)" (2.1–2b) to specify the editing range.

note You can press the [START / STOP] key to hear the portion that will be deleted by the "Cut" command.

② Select "Cut" to open the following dialog box.



③ The range to be edited is shown by Range "Start" and "End."

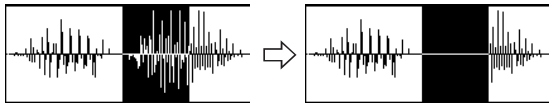
④ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.
Stereo For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*": About "Overwrite")

⑥ To execute the Cut command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Clear

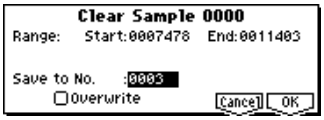
This command converts the data between "S (Edit Range Start)" and "E (Edit Range End)" to zero values. Sample data before and after the edited range will not move.



① Use "SMPL" (2.1–1a) to select the sample that you wish to edit, and use "S (Edit Range Start)" and "E (Edit Range End)" (2.1–2b) to specify the editing range.

note You can press the [START / STOP] key to hear the portion that will be changed to zero-level by the "Clear" command.

② Select "Clear" to open the following dialog box.



③ The range to be edited is shown by Range "Start" and "End."

④ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.
Stereo For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*": About "Overwrite")

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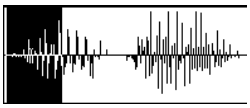
⑥ To execute the Clear command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Copy

This command copies the sample data from the area between “S (Edit Range Start)” and “E (Edit Range End)” into the sample data buffer. This data can then be used by the “Insert,” “Mix” or “Paste” commands.

When “Copy” is executed, the data that is loaded into the buffer simply references the data of the original sample. After using “Copy,” do not delete the copy source sample until you “Insert,” “Mix” or “Paste” the copied data.



① Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1–2b) to specify the editing range.

note You can press the [START / STOP] key to hear the portion that will be copied by the “Copy” command.

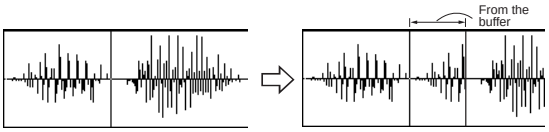
② Select “Copy” to open the following dialog box.

③ The range to be copied is shown by Range “Start” and “End.”

④ To execute the Copy command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Insert

When you execute the “Insert” command, the sample data that was loaded into the buffer by the “Copy” command will be inserted starting at the “S (Edit Range Start)” address. The data that had been at that location will be moved backward.



① Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and set “S (Edit Range Start)” to specify the starting address. The “E (Edit Range End)” (2.1–2b) setting is ignored.

② Select “Insert” to open the following dialog box.

③ To “Start” will indicate the starting address at which the data will be inserted.

④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

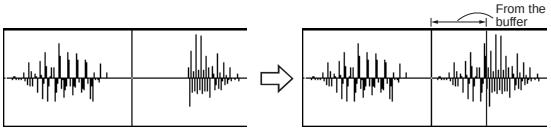
⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (☞p.99 “*”: About “Overwrite”)

⑥ To execute the “Insert” command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

If the buffer into which data was placed by the “Copy” command contains no data, the display will indicate “Source sample is empty.”

Mix

When you execute the “Mix” command, the sample that was loaded into the buffer by the “Copy” command will be mixed with the selected sample data. The data will be mixed starting at the “S (Edit Range Start)” address.



① Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and set “S (Edit Range Start)” (2.1–2b) to specify the starting address. The “E (Edit Range End)” setting is ignored.

② Select “Mix” to open the following dialog box.

③ To “Start” will indicate the starting address at which the data will be mixed.

④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (☞p.99 “*”: About “Overwrite”)

⑥ To execute the “Mix” command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

If the buffer into which data was placed by the “Copy” command contains no data, the display will indicate “Source sample is empty.”

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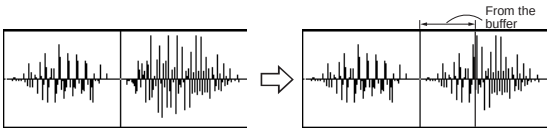
Paste

Beginning at the “S (Edit Range Start)” address, this command places the sample data that was loaded into the buffer by “Copy” command. The original data will be deleted, and overwritten by the sample data from the buffer. You can also place sample data into a blank sample. This is convenient when you wish to “Copy” part of a sample and create a new sample based on it.

Pasting to a sample that contains sample data



① Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and set “S (Edit Range Start)” (2.1–2b) to specify the starting address. The “E (Edit Range End)”setting is ignored.

② Select “Paste” to open the following dialog box.

③ To “Start” will indicate the starting address at which the data will be pasted.

④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (☞p.99 “*1: About “Overwrite””)

⑥ To execute the “Paste” command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

If the buffer into which data was placed by the “Copy” command contains no data, the display will indicate “Source sample is empty.”

Pasting to a sample that contains no sample data

① Use “SMPL” (2.1–1a) to select the vacant sample number that you wish to paste.
If you select ----:---**No Assign**---- for “SMPL” and then access the dialog box for this command, a vacant sample number will be selected automatically.

The “S (Edit Range Start)” and “E (Edit Range End)” (2.1–2b) settings will be ignored, and will have no effect. The beginning of the sample will be placed at address **0**.

② Select “Paste” to open the following dialog box.

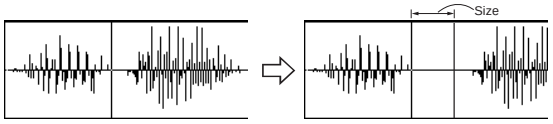
③ In “**Save to No.**,” specify the save destination sample number. If you wish to change it, re-specify the desired number.

Stereo If the sample data loaded into the buffer by “Copy” is stereo, the display will indicate “Save to No.(L)” and “(R).” Specify the save destination sample number for the L channel and the R channel.

④ To execute the “Paste” command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

Insert Zero

This command inserts zero-level sample data (silence), beginning at the “S (Edit Range Start)” address. The data that previously occupied that location will be moved backward.



① Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and set “S (Edit Range Start)” (2.1–2b) to specify the starting address. The “E (Edit Range End)” setting is ignored.

② Select “Insert Zero” to open the following dialog box.

③ To “Start” will indicate the starting address at which the data will be inserted.

④ In “Size,” specify the length of the data that will be inserted.

⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (☞p.99 “*1: About “Overwrite””)

⑦ To execute the “Insert Zero” command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

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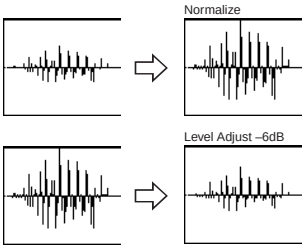
Norm./Level Adj. (Normalize/Level Adjust)

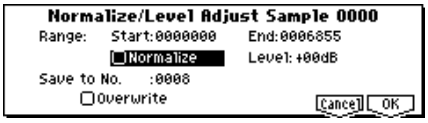
This command uniformly modifies the data values (volume) of the data between the “S (Edit Range Start)” and “E (Edit Range End).” “Normalize” will amplify the level of the sample data as far as possible without allowing it to clip (distort). If the level of the sampled data is too low, you can execute this command to increase the dynamic range. “Level” allows you to raise or lower the level as desired.



① Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1–2b) to specify the editing range.

note You can press the [START/STOP] key to hear the portion that will be normalized or level-adjusted.

② Select “Norm./Level Adj.” to open the following dialog box.



③ The range to be edited is shown by Range “Start” and “End.”

④ If you **check** “Normalize” and execute, the data will be normalized. In this case, the “Level” setting will be ignored.
If you wish to specify “Level” to modify the level of the sample data, do **not check** “Normalize.”

note Each increase of **+6 dB** will approximately double the height of the waveform shown in the LCD. **+12 dB** will be an increase of approximately 4X, and **+18 dB** will be approximately 8X. Conversely, each decrease of **–6 dB** will halve the level, so that **–6 dB** will be 1/2X and **–12 dB** will be approximately 1/4X. Executing the “Level” command with positive (+) settings may cause the sound to clip (i.e., distort at the point that amplification beyond the maximum level is impossible). Once the sample data has been boosted beyond the clipping point, re-executing this command with negative (–) settings of “Level” will simply lower the overall level of the clipped signal –the waveform will remain distorted.

Also, if executing “Level” with negative (–) settings causes any portion of the sample data to reach a zero level, the zero data will not return to its original state even if you re-execute “Level” with positive (+) settings.

⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

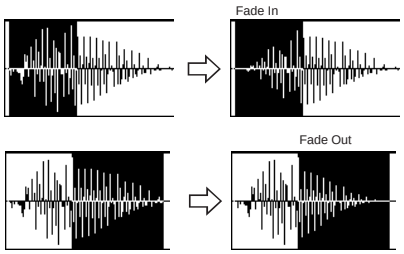
⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (☞p.99 “*1: About “Overwrite””)

⑦ To execute the Normalize/Level Adjust command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Be aware that if sample data of an extremely low level is normalized, any noise included in the sample will also be amplified.

Volume Ramp

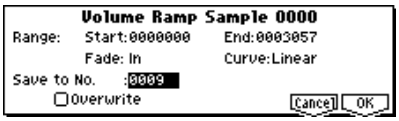
This command modifies the data values (volume) between the “S (Edit Range Start)” and “E (Edit Range End).” You can make the volume gradually increase (Fade In) or decrease (Fade Out) from the “S (Edit Range Start)” to the “E (Edit Range End).”



① Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1–2b) to specify the editing range.

note You can press the [START/STOP] key to hear the portion on which “Volume Ramp” will be executed.

② Select “Volume Ramp” to open the following dialog box.



③ The range to be edited is shown by Range “Start” and “End.”

④ Use “Fade” to select the type of volume ramp.
In: The volume will be zero at Range “Start,” and will gradually increase toward the “End” volume.
Out: The volume will gradually decrease from the Range “Start” volume, and will reach zero at the “End” volume.

⑤ In “Curve,” specify the way in which the volume will change.
Linear: The volume will change linearly. For normal fade-in or fade-out, select **Linear**.
Power: The volume will change non-linearly. When you use “Mix” (2.1–2e) to combine a faded-in waveform with a different faded-out waveform (i.e., crossfade), using a **Linear** fade-in/out may produce an impression that the volume has dropped in the middle of the curve. In such cases, use **Power** to perform the fade-in/out.

⑥ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

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⑦ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*1: About "Overwrite"")

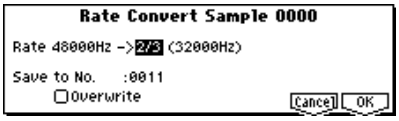
⑧ To execute the Volume Ramp command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Rate Convert

This command lowers the sampling rate (frequency) of the sampled data by 2/3, 1/2, 1/3, 1/4, or 1/6. The sampling frequency of input is fixed at 48 kHz, but you can use this command to create "down-sampling" effects. The sample data is thinned to convert it into sample data of a lower sampling frequency.
The "Rate Convert" command is always executed on all waveform data of the selected sample, regardless of the "S (Edit Range Start)" and "E (Edit Range End)" (2.1–2b) settings.

① Use "SMPL" (2.1–1a) to select the sample that you wish to edit.

② In the Edit2 page "UTILITY," choose "Rate Convert" to open the following dialog box.



③ The sampling rate of the selected sample is shown at the right of "Rate." At the right of the "->" you can select the desired amount of the sampling rate conversion: **2/3**, **1/2**, **1/3**, **1/4**, **1/6**. The sampling rate following conversion will be displayed.

④ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.

Stereo For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*1: About "Overwrite"")

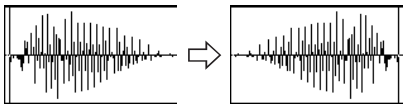
⑥ To execute the Insert Zero command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

This command cannot be executed on a sample whose sampling rate is less than 11.025 kHz.

Stereo samples must have the same sampling rate. Although it is possible to select mono multisamples for -L and -R and convert their sampling rate separately, they can no longer be handled as a stereo sample in this case.

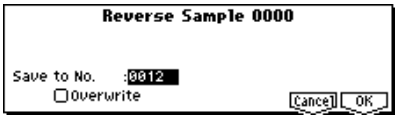
Reverse

This command reverses the sample data (i.e., exchanges the beginning and end).
The "Reverse" command is always executed on all waveform data of the selected sample, regardless of the "S (Edit Range Start)" and "E (Edit Range End)" (2.1–2b) settings.



① Use "SMPL" (2.1–1a) to select the sample that you wish to edit.

② In the Edit2 page "UTILITY," choose "Reverse" to open the following dialog box.



③ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.

Stereo For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

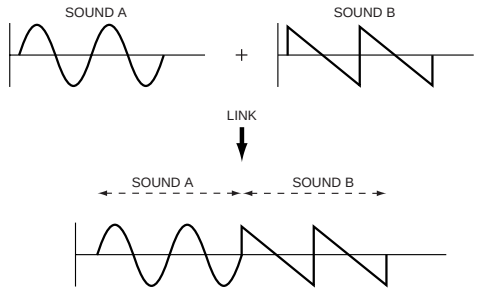
④ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*1: About "Overwrite"")

⑤ To execute the Reverse command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

note When you execute this command, the entire sample data will be rewritten backward. By using 3.1: Loop Edit "Rev (Reverse)" (3.1–1b), you can reverse the playback direction without affecting the sample data itself.

Link

This command connects the currently selected sample with another sample.



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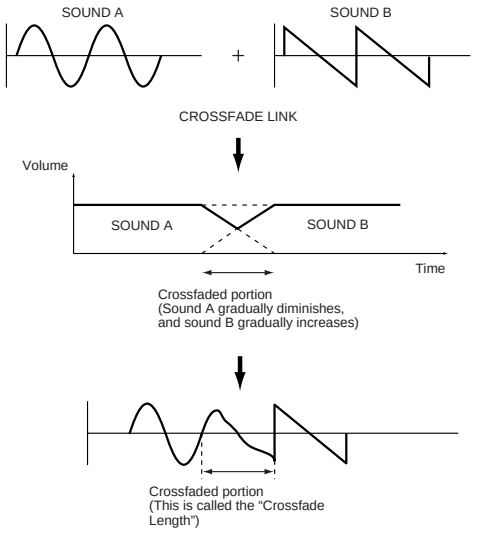
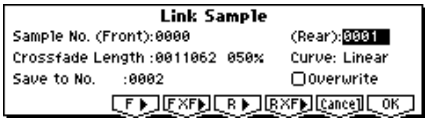
The volume of the two samples can be changed gradually at the transition to gradually mix the samples with each other. This is called **crossfade**, and can be used to produce a natural-sounding transition between the two sounds.



"Link" will be executed for all of the selected sample data, regardless of the "S (Edit Range Start)" and "E (Edit Range End)" (2.1–2b) settings.

① Use "SMPL" (2.1–1a) to select the sample that will be placed in front by the Link command.

② In the Edit2 page "UTILITY," choose "Link" to open the following dialog box.



③ The sample number selected for "**Sample No. (Front)**" - Sound A in the above example - will be displayed. When the command is executed, this sample will be placed in front.
While you hold down the [F3] ("F►") key, the entire sample will play back. After the entire sample has played back, it will stop.
Stereo If you select one side of a stereo sample, it will automatically be detected as a stereo sample, and the other side of the sample will also be processed by the Link command.
If the "Front" Sample is mono and the Rear Sample is stereo, the L and R of the "Rear" Sample will be mixed to mono before linking.
If the "Front" Sample is stereo and the "Rear" Sample is mono, the identical sample will be placed in L and R of the "Rear" Sample before linking.

④ Use "**Sample No. (Rear)**"- Sound B in the above example - to select the sample number that will be linked. When the command is executed, this sample will be placed in back.
While you hold down the [F5] ("R►") key, the entire sample will play back. After the entire sample has played back, it will stop.

⑤ In "**Crossfade Length**," specify the length over which the crossfade will occur. If you specify a **%** value, the proportion in relation to the entire "Front" Sample will be calculated automatically. If you specify **50%**, the last half of the "Front" Sample will crossfaded.

If the rear sample is short, the "Crossfade Length" cannot be set any longer than the length of the "Rear "sample. In this case, it will not be possible to specify a value up to 100%.

If you set "Crossfade Length" to other than **0**, "F XF►" and "R XF►" will be displayed. By holding down one of these buttons, you can play back just the crossfaded portion of the front or rear sample. Playback will stop after the length specified by "Crossfade Length." If you do not wish to crossfade, set this to **0**.

note

After selecting a sample in step ①, you can set "S (Edit Range Start)" and specify the beginning of the crossfade while viewing the waveform. Set "E (Edit Range End)" to the end of the sample. If you specify these, "Crossfade Length" will indicate the length determined by "S (Edit Range Start)" and "E (Edit Range End)."

⑥ In "**Curve**," specify how you want the volume to change in the crossfaded portion.
Linear: The volume will change linearly.
Power: The volume will change non-linearly. In some cases, "Linear" may sound as though the volume diminishes in the middle of the curve. If this occurs, use "Power."

⑦ In "**Save to No.**," specify the save destination sample number. An unused sample number will be selected by default. If "Overwrite" is checked, this cannot be set.
Stereo In the case of a stereo sample, "Save to No.(L)" and "(R)" will be displayed. You must specify the save destination sample for both the L channel and R channel.

⑧ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*1: About "Overwrite"")

⑨ To execute the Link command, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

If you link samples of different sampling rates (such as created by "Rate Convert" ☞2.1–2e), the newly created sample will have the sampling rate of the "Front" sample.

One vacant sample is used in order to execute Link. Be aware that if there are no vacant samples, an error will occur.

Grid

This command displays a grid in the "sample waveform display."If you check "Grid" and execute, vertical dotted lines will appear in the "sample waveform display," according to the resolution and tempo specified by "Resolution" and "♩ (Grid Tempo)" (2.1–2b). You can use this when cutting or editing sample data according to BPM values or beats. The vertical dotted lines are displayed starting at the address specified by the "S (Start)" (when Loop Off) or "LpS (Loop Start)" (when Loop On) settings of the 3.1: Loop Edit, Edit2 page, and show the timing when the currently selected key (displayed in gray) is played. (☞"Keyboard & Index" 1.1–1a)

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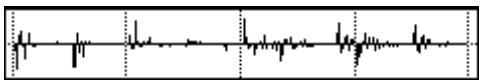
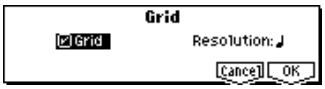


① Use “SMPL” (2.1–1a) to select a sample.

② In the Edit2 page “UTILITY,” choose “Grid” to open the following dialog box.



③ Check “Grid” to turn on the grid display.

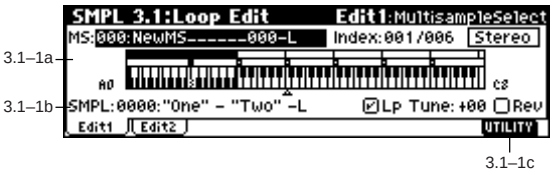
④ Set “Resolution” to the desired grid interval ♩–𝅘𝅥𝅯. The spacing of the grid will be determined by this setting and by “♩(Grid Tempo)” (2.1–2b).

⑤ To execute the setting, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

SMPL 3.1: Loop Edit

Here you can specify the portion of the sample that will be played back, set sample parameters for playback loop etc., and edit the sample. Sample parameters that were loaded into internal sampling memory in Media mode can also be edited in the same way. You can make detailed edits in single-sample steps while watching the sample waveform display.

3.1–1: Edit1



3.1–1a: MS, Index, Keyboard&Index

MS (Multisample Select) **[000...999]**

Selects the multisample whose loop and other sample parameters you wish to edit (☞1.1–1a).

Index **[xxx (001...128)/yyy (001...128)]**

Selects the index whose loop and other sample parameters you wish to edit. Your edits will apply to the sample assigned to this index , and the waveform will appear in the “sample waveform display” (☞1.1–1a).
To select an index, hold down the [ENTER] key and play a note on the keyboard. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in “Keyboard & Index.”

Keyboard & Index

(☞1.1–1a)

3.1–1b: SMPL, Lp, Tune, Rev

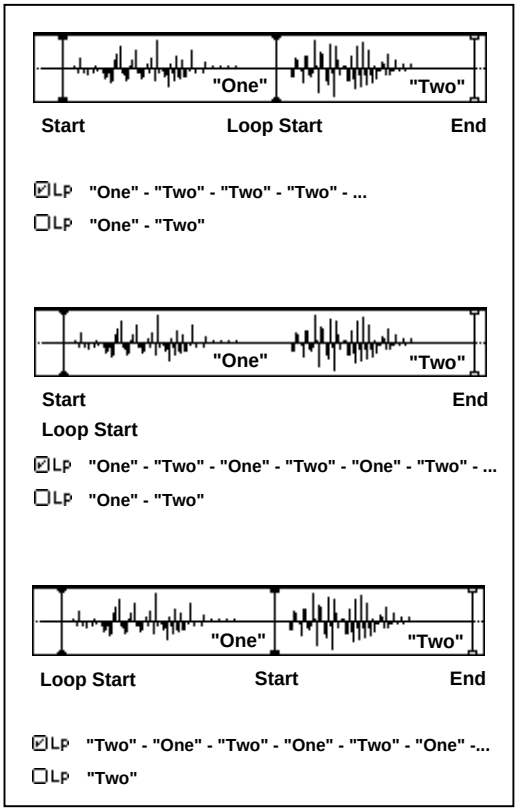
SMPL (Sample Select)
[----: ---No Assign----, 0000...3999]

This shows the sample number and name, and the range of the selected index. If you change “SMPL,” the sample you specify will be assigned to this index. The sample you select here will appear in the “sample waveform display” (☞1.1–1a).

Lp (Loop) **[Off, On]**

Specify whether the sample will be looped.
On (checked): The sample will play back repeatedly from “LpS (Loop Start)” to “E (End)”; i.e., “S (Start)” → “E (End)” → “LpS (Loop Start)” → “E (End)” → “LpS (Loop Start)” → ... (☞3.1–2b)
Off (unchecked): The sample will playback once (“one-shot”) from “S (Start)” → “E (End).”

This will be checked automatically if “Auto Loop” (1.1–3c) was checked when you sampled.



Tune (Loop Tune) **[–99...+99]**

When looping is on (“Lp” is checked), you can adjust the playback pitch of the loop from “S (Start)” to “E (End)” over a range of ±99 cents. When you loop data that was sampled from a musical instrument etc., the pitch of the looped portion may sometimes be incorrect. Use this parameter to compensate for such cases.

Rev (Reverse) **[Off, On]**

On (checked): The sample will be played backward, from “E (End)” (end address) to “LpS (Loop Start)” (loop start address).

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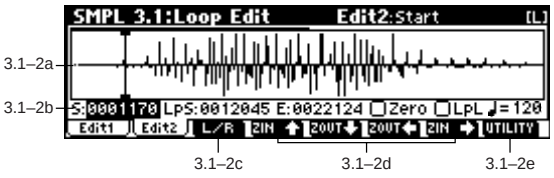
■ 3.1–1c: UTILITY

☞"Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo / MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1–3f)

3.1–2: Edit2



3.1–2a: Sample waveform display

Sample waveform display

The waveform of the "SMPL (Sample)" is displayed here (☞2.1–2a).

3.1–2b: Sample Address, Zero, LpL, ♩ (Grid Tempo)

S (Start) [0000000...]

Specifies the starting address for sample playback. This value is in units of a sample address.

LpS (Loop Start) [0000000...]

Specifies the loop start address for sample playback. This is valid when Loop is On. This value is in units of a sample address, (☞"S.Ofs" PROG 2.1–2b).

E (End) [0000000...]

Specifies the ending address for sample playback. This value is in units of a sample address.

Loop Start Address and End Address must be located at least eight addresses apart. This setting will be applied automatically when you set the addresses.

Zero (Use Zero) [Off, On]

On (checked): "S (Start)," "E (End)," and "LpS (Loop Start)" parameters can be set only at "zero-cross" addresses where the waveform level crosses ±0 (the center line of the waveform display). (☞2.1–2b)

Off (unchecked): "S," "E," and "LpS" can be set in steps of 1. This is the normal setting.

LpL (Loop Lock) [Off, On]

This fixes the length of the loop being edited.

On (checked): When the "LpS (Loop Start)" or "End" address is edited, the "E (End)" or "LpS" will be automatically adjusted so that the distance between "LpS" and "E (End)" (i.e., the loop length) does not change. This is convenient when you are creating a rhythm loop to match a specific tempo.

♩ (Grid Tempo) [040...480(BPM)]

This displays vertical dotted lines in the "sample waveform display" to indicate the resolution and tempo. Use this when you wish to cut or edit the sample data based on a BPM value or beat.
The grid will be displayed if you **check** and execute the "Grid" (2.1–2e / 3.1–2e) utility command. The spacing of the grid is determined by the "Resolution" setting of the "Grid" page menu command, relative to the playback pitch of the base key (the key displayed in gray in "Keyboard & Index" 1.1–1a) at the tempo value you specify here. The grid will begin at the "S (Start)" address (when looping is off) or at the "LpS (Loop Start)" address (when looping is on). This parameter can also be set from the 2.1: Sample Edit, Edit2 page.

This is not related to the setting of the REALTIME CONTROLS C-mode [TEMPO] knob.

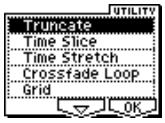
■ 3.1–2c: L/R

This option is valid only if a stereo sample is selected.
It switches the display between the L channel and R channel of a stereo sample. (☞2.1–2c)

■ 3.1–2d: ZOOM

These buttons let you zoom-in and zoom-out the "sample waveform display" in the horizontal axis (sample addresses) or vertical axis (sample level). (☞2.1–2d)

■ 3.1–2e: UTILITY

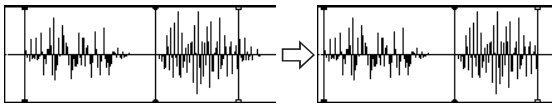


For details on how to select the desired utility function, refer to "2.1–2e: UTILITY."

☞"Grid" (2.1–2e)

Truncate

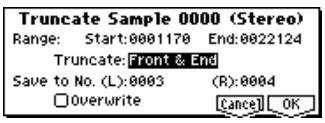
This command deletes unwanted data that lies outside of the "S (Start)," "LpS (Loop Start)," and "E (End)" (3.1–2b). After setting the start address, loop start address, and end address of the sample, use this command to delete unwanted sample data.



① Use "SMPL" (3.1–1b) to select the sample that you wish to edit, and use "S (Start)" or "LpS (Loop Start)" and "E (End)" (3.1–2b) to specify the editing range.

note You can press the [AUDITION] key to hear the portion that will be left by the "Truncate" command.

② In the Edit2 page "UTILITY," choose "Truncate" to open the following dialog box.



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③ Range “Start” and “End” will show the range of data that will be edited.

④ Use “Truncate” to select the portion that will be deleted.
Front & End: The sample data that lies before the “Start” and after the “End” will be deleted.
Front: The sample data that lies before the “Start” (start address) will be deleted.
End: The sample data that lies after the “End” (end address) will be deleted.

⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected.

Stereo For a stereo sample, “Save to No.(L), (R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (☞p.99 “*1: About “Overwrite””)

⑦ To execute the Truncate command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Time Slice

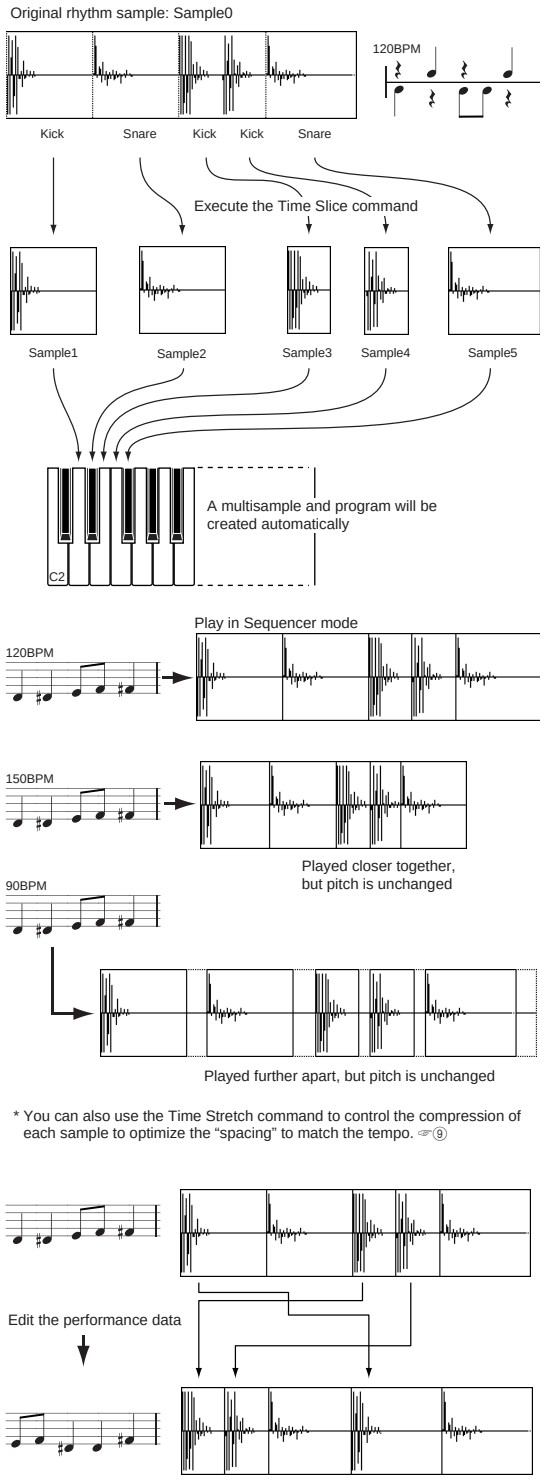
Time Slice detects the attacks (e.g., kick and snare) within a rhythm loop sample (a sample that loops a drum pattern, etc.), and automatically divides the sample into individual percussion instrument notes. The divided percussion instrument notes will be created as individual samples, and automatically assigned as a multisample and program. Song performance data corresponding to the divided samples will also be created, so that in Sequencer mode you can adjust the tempo of the song to change only the tempo of the rhythm loop without affecting the pitch. The performance data that is created will use notes D2 and above, corresponding to the newly created samples of individual percussion instruments.

In addition to changing only the tempo of the rhythm loop without affecting the pitch, this makes it possible for you to exchange note numbers, to change the timing, or to edit the sequence data to freely recreate the original rhythm loop.

Time Slice also allows you to change the pitch of the track without affecting the tempo for new creative possibilities.

This command can also be executed on a stereo sample.

note As an alternative to Utility “Time Slice,” the Utility “Time Stretch” (3.1–2e) command can also be used to change the tempo without affecting the pitch of a rhythm loop sample etc. “Time Stretch” is suitable when you do not need to divide the sample or to create multi playback data for the divided sample.



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① Use “SMPL” (3.1–1b) to select the sample that you wish to Time Slice.

② From the Edit2 page “UTILITY,” choose “Time Slice” to open the following dialog box.

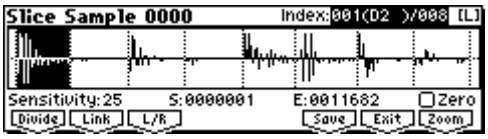
③ Specify the number of quarter-note beats and tempo of the currently selected sample. If you know the BPM of the original waveform, set “Source BPM.” If you do not know the BPM, specify “Beat” and the BPM will be calculated automatically. The setting you make here will be used as the reference value when detecting the attack, when performing Time Stretch in step ⑨b, and when saving the sequence data in step ⑩.

Beat: Specify the number of quarter-note beats. When you specify “Beat,” the “Source BPM” will indicate the playback BPM at the original key. This BPM value will automatically be calculated from the start address to the end address (if loop is off) or from the loop start address to the end address (if loop is on) of the selected sample. If you know the BPM and it is different than the displayed value, change “Source BPM” to the correct value.
For example in the case of a 120 BPM sample of one measure of 4/4 time, set “Beat” to **4**. The “Source BPM” will be calculated automatically. If the “Source BPM” is not set to 120, due to inaccuracies in the start address (or loop start address) and end address, change the “Source BPM” to **120**.
Source BPM: Specifies the tempo at the original key of the source waveform.

④ To execute Time Slice, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.
When you press the [F8] (“OK”) key, the attacks will be detected, the sample will automatically be sliced, and a dialog box will appear.

Stereo In the case of a stereo sample in which L and R have different lengths, silent data will automatically be added to the end of the shorter sample so that the two samples will be the same length.

If you want to reset “Beat” and “Source BPM” after pressing the [F8] (“OK”) key, you can do so in step ⑨a.



⑤ Listen to the samples that were divided by detecting their attacks. The sample before slicing is assigned to the C2 note of the keyboard, and the sliced samples are assigned to notes D2 and above. When you change the “Index,” the corresponding display will be highlighted, allowing you to view the sliced waveforms.

To select an index, hold down the [ENTER] key and play a note on the keyboard. The index that includes the note you played will be selected.

To hear the sliced sounds, you can either press the corresponding note on the keyboard, or change the index to select the desired sample and then press the [AUDITION] key. When you press the [AUDITION] key, the sample in the range between the specified “S (Start)” and “E (End)” will be played at the original key.

Index
[Source(C2), xxx: 001...090(zzz: D2...G9)/yyy: 001...090]:
Select the sample index.
If this is set to **Source**, the original waveform before time slicing will be selected.
By selecting **xxx(zzz)/yyy** you can specify individual samples that were sliced. **xxx** indicates the selected sample, and **yyy** indicates the total number of samples that were sliced. **zzz** indicates the number of notes that are assigned to the selected index. A maximum of 90 samples can be assigned to the keyboard. If more than 90 samples were sliced, this will display 90.

Sample waveform display: This displays a dotted vertical line at the locations where the sample was sliced, and a solid vertical line at the “S (Start),” “LpS (Loop Start),” and “E (End)” locations. When “Index” is **xxx(zzz)/yyy**, the sample of the selected index will be highlighted.

Stereo In the case of a stereo sample, you can press the [F3] (“L/R”) key to switch the display between the L channel and R channel of the sample data. (☞2.1–2c)

ZOOM: When you press the [F8] (“Zoom”) button the zoom buttons will appear, allowing you to zoom-in or zoom-out vertically or horizontally on the sample waveform display (☞2.1–2d). Press the [F8] (“Zoom”) key once again to return to the previous display.

⑥ If the slice locations are not appropriate, you can adjust “Sensitivity” to change the sensitivity at which the attacks are detected, in order to change the slice locations.

Sensitivity **[00...30]:**
Adjusts the sensitivity at which the attacks are detected. By increasing this value, you can detect attacks at even lower levels, to create more finite slices.

The “level” in this case does not necessarily correspond to the “waveform level.”

Depending on the sample, the desired slicing may not occur even if you increase the “Sensitivity.” If the attack portion of the following sample has overlapped into the end of the sample, or if the sample contains two sounds, make adjustments in step ⑦.

⑦ Make adjustments where the automatic attack detection did not occur correctly. Change “Index” to select the sample that you wish to adjust. Make adjustments by changing “S (Start)” and “E (End),” and by executing “Divide” or “Link” to adjust the slice location.
S (Start): Specifies the start address for the sample of the currently selected “Index.” At the same time, the end address of the sample for the preceding “Index” will also be adjusted.
E (End): Specifies the end address for the sample of the currently selected “Index.” At the same time, the start address of the sample for the next “Index” will also be adjusted.

If “Index” is set to **Source**, the address of the original waveform will be modified. If you change the start address, the loop start address will also be changed at the same time.

When adjusting the “S (Start)” and “E (End)” addresses of the divided samples, use “ZOOM” to increase the magnification (×1 or more) so that the sample waveform is displayed accurately when you make adjustments. (☞2.1–2d)

Zero (Use Zero): (☞2.1–2b)

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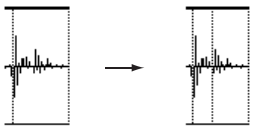
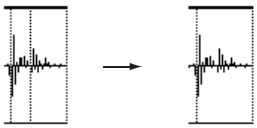
note If you wish to adjust the “S (Start)” or “E (End)” address of a divided sample, it is best to first check “Use Zero.” In general, using zero-cross points to specify sample addresses will make it less likely that clicks or pops will occur, particularly at the end address.

Divide: This splits the sample of the currently selected “Index” into two. Use this when you wish to add another location to slice the sample. Modify “E (End)” or “S (Start)” to adjust the divided sample.



Link: This joins the sample of the currently selected “Index” to the sample of the next “Index.” Use this when you wish to merge together two sliced locations.



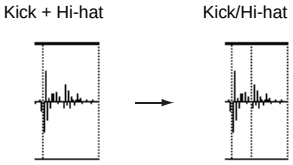
Be aware that if you change the “Sensitivity” after adjusting the slice location, the attacks will be re-detected and the sample will automatically be sliced again.

note When you use Time Slice on a rhythm loop sample, the quality of the playback in Sequencer mode will depend largely on the “cutoff” of each percussion instrument sound that was sliced.

What kind of slices will produce the best result?

A. Divide the separate percussion instrument notes as finely as possible

For example in the case of a sample where the decay of the kick is overlapped by the hi-hat, the attack sound of the kick and the attack sound of the hi-hat should be sliced to create two samples. If these sounds are left as one sample (containing both kick and hi-hat), their rhythm may become incorrect when the sample is played at a different tempo.



If the sample is not sliced appropriately even after you adjust the “Sensitivity,” use “Divide” to divide the sample into halves, and adjust “E (End)” and “S (Start)” as needed.

B. Make sure that each divided sample has a clear attack

The attack portion is vital for percussion sounds. Slice the sample at a point where the attack will be sounded crisply.

C. Avoid the noise that can occur toward the end of each divided sample

For example as shown in the above right illustration noise can be present at the end of the kick sample. Adjust the end address of the kick sample so that the noise is not obtrusive.

In this case, adjusting the end address will also affect the start address of the hi-hat sample. While listening to the two samples, make adjustments so that the noise at the end of the kick sample is as inconspicuous as possible, and also that the hi-hat attack is heard cleanly.

Pay attention to these points as you adjust “Sensitivity.” If necessary, use the methods described above to edit each sample.

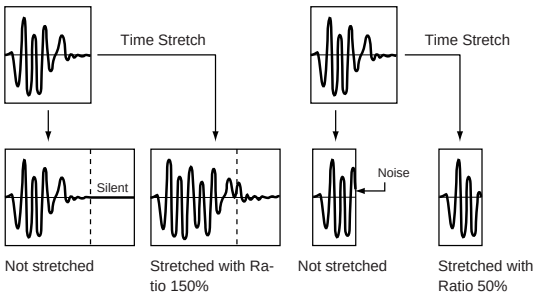
The noise occurring at the end of the sample in “C.” will be automatically reduced when you execute steps ⑧ and following. You should adjust “Sensitivity” while paying particular attention to sections “A” and “B,” and then execute step ⑨. If the noise is still obtrusive, then you can adjust the end address.

⑧ Save the sliced samples to the multisample to which they have been assigned. When you press the [F6] (“Save”) key, the “Save Smpl/MS” dialog box will appear.

⑨ Use “Stretch” to adjust the length of the sliced samples. When you press the [F5] (“Strch”) key, Time Stretch (a function that expands or shrinks the length of a sample without affecting its pitch) will be applied to the sliced sample.

If you wish to save the sliced sample as it is, proceed to step ⑩ without executing Time Stretch.

Sometimes when a sliced sample is played in Sequencer mode and the tempo is slowed down, the silent portion between samples may become obvious or noise may be more apparent, producing an unnatural-sounding result. To avoid this, you can use Time Stretch to adjust the length of the individual samples. The length of the samples will automatically be optimized according to the “Ratio” and “New BPM” settings.



note If you execute Time Stretch at **100%**, the sample length will not change but the end of the sample will be faded out, reducing the noise.

a) Set “**Beat**” and “**Src BPM (Source BPM)**.” The method is the same as in step ③. If you wish to change the value you set in step ③, you can change it here.

b) Specify the length of the sample that will be created by Time Stretch.

- **To specify the length as a ratio**
  Set “**Ratio**.” The available range is **50.00–200.00%**. If you specify **50.00%**, the sample length will be halved. (The tempo will double.) If you specify **200.00%**, the sample length will double. (The tempo will be halved.)
- **To match an existing BPM tempo value**
  Use “**New BPM**” to specify the BPM value of the sample you wish to create. The “Ratio” will automatically be calculated from the “Src BPM (Source BPM)” and the “New BPM” values.

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It is not possible to make settings that would cause “Src BPM (Source BPM)” or “New BPM” to exceed the range of 40–480.
It is not possible to make settings that would cause “Ratio” to exceed the range of 50.00–200.00.

Press the [F5] (“Strch”) key to execute Time Stretch. When you execute, the time-stretched samples will automatically be assigned to keys D2 and above, so that you can audition them by playing the keyboard or by changing “Index” and pressing the [AUDITION] key. You can also keep trying various settings for “Ratio” and “New BPM.”
Index: Selects the index of the sample that will be sounded by the [AUDITION] key. After Time Stretch is executed, the time-stretched samples will sound. However, it will not be possible to select **Source (C2)**.

note When you audition the time-stretched samples, the sound you hear is the sound of each divided sample as it will be played in Sequencer mode. If there is obtrusive noise or if the attack is not sound cleanly, return to step ⑦ and adjust the “S (Start)” and “E (End)” addresses, etc.

⑩ When you execute Save, use “With” to specify the data that will be created simultaneously.

Program: If this check box is **checked**, the multisample will be converted to a program when you save it. Specify the destination program number.

Stereo In the case of a stereo sample, the program pan will automatically be set. This allows the stereo position in Sampling mode to be reproduced by the program.

Seq.Event: If this check box is **checked**, sequence data to play the sliced samples will be created when you save. Set “**Song**,” “**Track**,” and “**Meter**” to specify the song number, track number, and time signature that will be created.

Events will be created from measure 1 of the specified track.

If you specify a vacant song number for the song, the song will be created with the number of measures specified by the Sequencer mode parameter “Set Length” (a parameter in the dialog box that appears when you create a new song ☞p.51). The default is 64 measures.

If you executed Time Stretch, the Song parameter “Tempo” (☞p.50, SEQ 1.1–1a) of the created song will be the value specified by “New BPM.” If you did not execute Time Stretch, it will be the value specified by “Source BPM.” If a tempo event exists only at the beginning of the master track, the tempo of that event will also be set to the value specified for “New BPM” or “Source BPM.”

If you save to a song that already contains data and the time signature is different, the samples may not sound as they did originally. You will need to set the time signature of the master track to match.

If both “Program” and “Seq.Event” are **checked**, the song parameters “Program Select” (☞p.54) and “Track Play Loop” (☞p.57) will also be set automatically.
For “Track Play Loop,” “Loop On” will be turned **on** and “Play Intro” will be turned **off**. “Loop Start Meas (Loop Start Measure)” will be set to **000**, and “Loop End Meas (Loop End Measure)” will be calculated according to “Meter” and “Src BPM (Source BPM)” and set accordingly.
You can hear the results immediately by selecting and playing the song in Sequencer mode.

Normally you will leave both **checked**.

⑪ If you wish to save, press the [F8] (“Save”) key. If you decide not to save, press the [F7] (“Cancel”) key. When you save, the samples and multisample will automatically be saved to vacant samples and multisamples.

Stereo In the case of stereo samples, the samples and multisample will be saved in stereo.

⑫ By repeating steps ⑥–⑪ you can create as many samples and multisamples as desired.

⑬ Press the [F7] (“Exit”) key to exit the Time Slice command.

Be aware that the created samples and multisample will be lost if you exit Time Slice without saving the samples or multisample (“Save” in the Save dialog box).

Before executing Time Slice on a long sample, you should first divide the sample into measures. In some cases, it may not be possible to assign the sample to the keyboard or create sequence data.
Time Slices requires vacant samples, multisamples, and relative parameters in order to execute. Be sure that there is sufficient free area before you execute. If there is insufficient free area, an error will occur.

note If you open the Time Slice dialog box on the same sample, it will be sliced in the same way as previously. These slice locations will also be used if you execute **Slice** in “Time Stretch” (☞3.1–2e), so that you can execute Time Stretch without having to make the settings again.
If you wish to detect the attacks again or to re-do the operation, change the “Sensitivity” after you open the dialog box.

Time Stretch

Time Stretch is a function that modifies the tempo by lengthening or shortening a sample without changing its pitch. This is convenient when you wish to change the tempo of a rhythm loop (drums) or a melodic sample (e.g., vocal, strings, winds) to match the tempo of another sample or of the sequencer. The TRITON Le provides two ways in which Time Stretch can be executed. This command also supports stereo samples.

Sustaining

This type is suitable for sustained sounds such as vocal or instruments. Using it to change the tempo of phrases such as guitar or piano will also produce good results.

Slice

This type is suitable for decay-type instruments such as drums. Using it to change the tempo of drum or percussion loops will produce good results with minimal effect on the attack.

note There is a way to change the pitch as well when changing the tempo of a rhythm loop sample (“Pitch BPM Adj.” 4.1–2b, “Detune BPM Adjust” COMBI 3.1–3b, SEQ 3.1–5(6)b). You can create unique effects by raising or lowering the pitch of drums etc.

To use Time Stretch (Sustaining)

① Use “SMPL” (3.1–1b) to select the sample that you wish to time stretch as **Sustaining**.

② From the Edit2 page “UTILITY,” choose “Time Stretch” to open the following dialog box.

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③ Select “**Sustaining**” as the time stretch method.
Press the [F8] (“OK”) key to execute Time Stretch, or press the [F7] (“Cancel”) key to cancel without executing.

Stereo If the L and R of a stereo sample are different in length, blank data will automatically be added to the end of the shorter sample so that it matches the longer side.

④ A dialog box for executing Time Stretch will appear.

⑤ Set “**Quality**” to specify the desired audio quality of the sample produce by Time Stretch. The range is **0**–**7**. Although it will depend on the sample, higher settings will produce better results. However, be aware that higher settings will also require a longer time to execute. Since you can try this as many times as you like, you should normally start with about **4**, and raise or lower the setting gradually.

⑥ Set the proportional length of the sample that will be created by Time Stretch.

- **To specify the length as a ratio**
  Set “**Ratio**.” The available range is **50.00%**–**200.00%**. If you specify **50.00%**, the sample length will be halved. (The tempo will double.) If you specify **200.00%**, the sample length will double. (The tempo will be halved.)
- **To match an existing BPM tempo value**
  Set “**Beat**” as the number of quarter-note beats. When you change “Beat,” the “Source BPM” value will be changed automatically.

  “**Source BPM**” will indicate the playback BPM value at the original key. This BPM value is automatically calculated according to the length from the start address to the end address (if loop is off) or from the loop start address to the end address (if loop is on). If you already know the BPM value and the calculated value is incorrect, change it to the correct value.

  Use “**New BPM**” to specify the BPM value of the sample you wish to create. “Ratio” will automatically be calculated from the “Source BPM” and “New BPM” values.

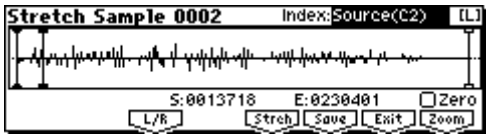
  For example if you have a one-measure 120 BPM sample in 4/4 time, and would like to change it to 150 BPM, you would set “Beat” to **4**. The “Source BPM” will be calculated automatically. If the “Source BPM” is not calculated as 120 due to inaccuracies in the start address (or loop start address) or end address, adjust “Source BPM” to the correct value of **120**.
  Next, set “New BPM” to **150**. The “Ratio” will be calculated automatically.

It is not possible to make settings that would cause “Source BPM” or “New BPM” to exceed the range of 40–480.
It is not possible to make settings that would cause “Ratio” to exceed the range of 50.00–200.00.

Depending on the sample, the length may not be exactly as you specify, due to limitations in processing accuracy.

⑦ To execute the Time Stretch operation, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

When you press the [F8] (“OK”) key, the Time Stretch dialog box will appear.



⑧ Audition the sample that was created by Time Stretch. The sample before being time-stretched is assigned to the note number C2 of the keyboard, and the sample that was time-stretched is assigned to note number C#2. You can change the “Index” to check the waveform.

Index [Source(C2), Result(C#2)]:
Select the index for the sample whose waveform you wish to display.
If you select **Source**, the original waveform before time-stretching will be selected.
If you select **Result**, the time-stretched sample will be selected.

note To select an index, hold down the [ENTER] key and play a note on the keyboard. The index that includes the note you played will be selected.

Sample waveform display: This shows the waveform of the selected sample. As in 3-1: Loop Edit, Edit2 page, “S (Start), “LpS (Loop Start),” and “E (End)” addresses are shown by a solid line.

Stereo In the case of a stereo sample, you can press the [F3] (“L/R”) key to switch the display between the L channel and R channel of the sample data. (☞2.1–2c)

S (Start):
E (End):
Specifies the start address and end address of the sample for the currently selected index.
When you execute Time Stretch, the addresses will be specified automatically, but the playback may be slightly skewed due to inaccuracies in the end address, etc. If this occurs, you can correct the addresses manually.

When you change the start address, the loop start address will also be changed simultaneously. If you wish to independently adjust the start address and loop start address, save the data in step ⑩, and then make settings in the 3.1: Loop Edit Edit2 page.

note To audition the sound in the specified range, play the keyboard or press the [AUDITION] key. When you press the [AUDITION] key, the sample in the range specified by “S (Start)” and “E (End)” will sound at the original key.

Zero (Use Zero): (☞2.1–2b)

L/R: (☞2.1–2c)

ZOOM: When you press the [F8] (“Zoom”) button the zoom buttons will appear, allowing you to zoom-in or zoom-out vertically or horizontally on the sample waveform display (☞2.1–2d). Press the [F8] (“Zoom”) key once again to return to the previous display.

⑨ If you press the [F5] (“Strch”) key, the Time Stretch dialog box will appear, and you can re-do the time stretch once again. Execute Time Stretch as described in step ⑥.

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⑩ Save the sample that you created. Press the [F6] (“Save”) key, and the Save dialog box will appear.

In “**Save to No.**,” specify the save destination sample number. By default, an unused sample number will be selected. If “Overwrite” is checked, this cannot be selected.
If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (☞p.99 “*1: About “Overwrite””)

Stereo In the case of a stereo sample, the dialog box will indicate “To Sample No. (L)” and “To Sample No. (R).” Specify the save destination sample for the L channel and R channel.

To execute the Save operation, press the [F8] (“OK”) key. To cancel without saving press the [F7] (“Cancel”) key.

⑪ By repeating steps ⑨–⑩ you can create more samples as desired.

⑫ Press the [F7] (“Exit”) key to exit the Time Stretch operation.
The index will specify the last-saved sample number.

note If you wish to use the saved sample in Program mode or Sequencer mode, you must either execute “Conv. To Prog” (☞p.97, 1.1–3f), or use Program mode “Multisample” (☞PROG 2.1–2b, 2.1–3) to select the multisample and create a program.

Be aware that the created sample will be lost if you exit Time Stretch without saving the sample in the Save dialog box.

Time Stretch requires vacant samples, multisamples, and relative parameters in order to execute. Before you execute, make sure that there is sufficient free space. If there is not, an error will occur.

To use Time Stretch (Slice)

① Use “SMPL” (3.1–1b) to select the sample that you wish to time stretch as **Slice**.

② From the Edit2 page “UTILITY,” choose “Time Stretch” to open the following dialog box.

③ Select “**Slice**” as the time stretch method.
Press the [F8] (“OK”) key to execute Time Stretch, or press the [F7] (“Cancel”) key to cancel without executing.

Stereo If the L and R of a stereo sample are different in length, blank data will automatically be added to the end of the shorter sample so that it matches the longer side.

④ A dialog box for executing Time Stretch will appear.

⑤ Specify the number of quarter note beats and tempo of the currently selected sample. If you already know the BPM value, set “Source BPM.” If you do not know the BPM, setting “Beat” will cause the BPM to be calculated automatically. The settings here are also used as the reference values when detecting the attacks at which the sample is divided.

Beat: Specify the number of quarter note beats. When you change “Beat,” the “Source BPM” will indicate the BPM value for playback at the original key. This BPM value is automatically calculated according to the length from the start address to the end address (if loop is off) or from the loop start address to the end address (if loop is on). If you already know the BPM value and the calculated value is incorrect, change “Source BPM” to the correct value.
For example if you have a one-measure 120 BPM sample in 4/4 time, you would set “Beat” to **4**. The “Source BPM” will be calculated automatically. If the “Source BPM” is not calculated as 120 due to inaccuracies in the start address (or loop start address) or end address, adjust “Source BPM” to the correct value of **120**.
Source BPM: Specify the tempo at the original key of the original waveform.

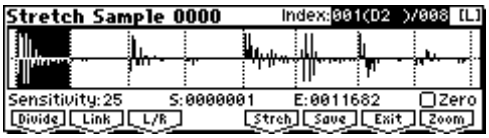
“Source BPM” cannot be set or displayed outside the range of 40–480.

⑥ Set the proportional length of the sample that will be created by Time Stretch.

- **To specify the length as a ratio**
  Set “**Ratio**.” The available range is **50.00%–200.00%**. If you specify **50.00%**, the sample playack time will be halved. (The tempo will double.) If you specify **200.00%**, the sample playback time will double. (The tempo will be halved.)
  The tempo of the sample created by execution will be calculated automatically from the “Ratio” and “Source BPM,” and displayed in “New BPM.”
- **To match a desired BPM tempo value**
  Set “**New BPM**” to the desired BPM value of the sample that will be created. “Ratio” will automatically be calculated from the “Source BPM” and “New BPM” values.

It is not possible to set or display “New BPM” outside the range of 40–480. It is not possible to set or display “Ratio” outside the range of 50.00–200.00.

⑦ To execute Time Stretch, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key. When you press the [F8] (“OK”) key, the attacks will be detected and the sample will be divided automatically, and time stretch will be performed.
The Time Stretch dialog box will appear.



⑧ Audition the results that were created by Time Stretch. The original sample (before being time-stretched) is assigned to the C2 note of the keyboard. The time-stretched sample is assigned to C#2. Sliced (divided) samples will be assigned consecutively upward, starting from D2 on the keyboard.

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Index **[Source(C2), Result(C#2), xxx: 001...090(zzz: D2...G9)/yyy: 001...090]:**
Select s the index for the sample whose waveform you wish to display.
If you select **Source**, the original waveform before time-stretching will be selected.
If you select **Result**, the time-stretched sample will be selected.
If you set this to **xxx(zzz)/yyy**, an individually sliced sample will be selected. **xxx** is the selected index, and **yyy** indicates the total number of sliced samples. **zzz** indicates the number of notes that are assigned to the selected index. A maximum of 90 samples can be assigned to the keyboard. If the sample was sliced into more than 90 samples, this will be displayed as 90.

note To select an index, hold down the [ENTER] key and play a note on the keyboard. The index that includes the note you played will be selected.

When you execute Time Stretch, the addresses will be specified automatically. However, playback may be slightly offset due to inaccuracies in the end address, etc. If this occurs, set "Index" to **Result**, and use "S (Start)" and "E (End)" to re-specify the addresses.

Sample waveform display: This displays the waveform of the selected sample. If the "Index" is other than **Result**, the locations at which the sample is sliced will be indicated by a dotted line (vertical). If "Index" is set to **xxx(zzz)/yyy**, the sample of the selected index will be highlighted. If "Index" is other than **xxx(zzz)/yyy**, the Start, Loop Start, and End addresses will be indicated by solid lines (vertical).

Stereo In the case of a stereo sample, you can press the [F3] ("L / R") key to switch the display between the L channel and R channel of the sample data. (☞2.1–2c)

ZOOM: When you press the [F8] ("Zoom") button the zoom buttons will appear, allowing you to zoom-in or zoom-out vertically or horizontally on the sample waveform display (☞2.1–2d). Press the [F8] ("Zoom") key once again to return to the previous display.

⑨ If the slice locations are not appropriate, use "Sensitivity" to modify the sensitivity at which the attacks are detected, thus changing the slice locations.

Sensitivity **[00...30]:**

S (Start):

E (End):

Zero (Use Zero):

Divide:

Link:
Refer to "Time Slice" steps ⑥ and ⑦.

⑩ When you press the [F5] ("Strch") key, the Time Stretch dialog box will appear, and you can re-do the time stretch. Execute Time Stretch using the same procedure as in step ④–⑦. If the sample slice locations are not appropriate, this will also affect the result of Time Stretch. For details on setting the slice locations, refer to "Time Slice," steps ⑥ and ⑦.

⑪ Save the sample you created. Press the [F6] ("Save") key, and the Save dialog box will appear.

In "**Save To No.**," specify the save destination sample number. By default, an unused sample number will be selected. If "Overwrite" is checked, this cannot be set. If you wish to delete the original sample data and overwrite it with the edited sample data, **check "Overwrite"**. Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*1: About "Overwrite"")

If you execute this command with "Overwrite" **checked**, the original sample data will be deleted, and overwritten by the edited sample data. Thus, in the Time Stretch dialog box that appears after execution, the edited sample data will automatically have its attacks detected and sliced, and displayed in "Index" **Source**.

Stereo In the case of a stereo sample, the display will show "To Sample No. (L)" and "To Sample No. (R)." Specify the L channel and R channel save destination sample numbers respectively.

To execute the Save, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

⑫ By repeating steps ⑩–⑪ you can create more time stretched samples as desired.

⑬ Press the [F7] ("Exit") key to end the Time Stretch operation.
The last-saved sample number will be set for the index.

note If you wish to use the saved sample in Program mode or Sequencer mode, you must either execute "Conv. To Prog" (☞p.97, 1.1–3f), or use Program mode "Multisample Select" (☞PROG 2.1–2b, 2.1–3) to select the multisample and create a program.

Be aware that the created sample will be lost if you exit Time Stretch without saving the sample in the Save dialog box.

Before executing Time Stretch on a long sample, you should first divide the sample into measures. In some cases, it may not be possible to assign the sample to the note number or edit the **slice** locations.
Time Stretch requires vacant samples, multisamples, and relative parameters in order to execute. Before you execute, make sure that there is sufficient free space. If there is not, an error will occur.

note If you open the time slice (Slice) dialog box on the same sample, it will be sliced in the same way as previously. These slice locations will also be used if you execute "Time Slice" (☞3.1–2e), so that you can execute time stretch without having to make the settings again.
If you wish to detect the attacks again or to re-do the operation, change the "Sensitivity" after you open the dialog box.

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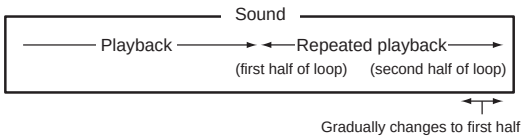
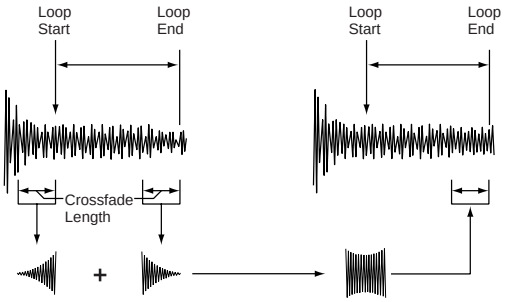
Crossfade Loop

When pitched instrumental samples such as strings or winds are looped to sustain a note, the sound will "jump" or "skip" repeatedly during playback if there is a significant difference between the waveforms at the loop start and loop end locations.
In order to solve such problems, Crossfade Loop causes the sound to change gradually from the end to the beginning of the loop.

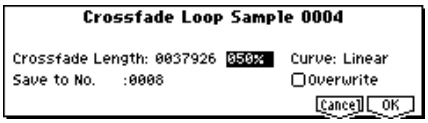


In actuality, the sample data is created as follows. A specific length (the "Crossfade Length") of the waveform immediately before the beginning of the loop is taken and mixed with the end portion.
At this time, the waveform level of the portion immediately before the end (the length specified by "Crossfade Length") will gradually decrease, and the waveform level immediately before the beginning of the loop will gradually increase as the two are mixed.



① Use "SMPL" (3.1–1b) to select the sample that you wish to crossfade.

② From the Edit2 page "UTILITY," choose "Crossfade Loop" to open the following dialog box.



③ In "**Crossfade Length**," specify the length of the sample that you wish to crossfade.
If you set this as **%**, "Crossfade Length" will be calculated automatically. Specify the proportion of the "Crossfade Length" relative to the length between the loop start and loop end. If you set this to **50%**, crossfade will be performed on the second half of the region between loop start and loop end.

If the length from the beginning of the sample to the loop start is shorter than the length from the loop start to the loop end, "Crossfade Length" can be set only up to the length from the beginning of the sample to the loop start. In this case, a setting of 100% will not be possible.

④ Set "**Curve**" to specify how the volume will change in the crossfaded region.
Linear: The volume will change linearly.
Power: The volume will change non-linearly. Sometimes a setting of Linear will produce the impression that the volume has dropped in the middle of the curve. In such cases, use Power.

⑤ In "**Save to No.**," specify the save destination sample number. By default, an unused sample number will be selected. If "Overwrite" is checked, this cannot be set.
Stereo In the case of a stereo sample, the display will indicate "Save to No.(L)" and "Save to No.(R)." Specify the save destination sample numbers for the L channel and R channel respectively.

If you wish to delete the original sample data and overwrite it with the edited sample data, **check "Overwrite"**. Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (☞p.99 "*1: About "Overwrite"")

⑥ To execute Crossfade Loop, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

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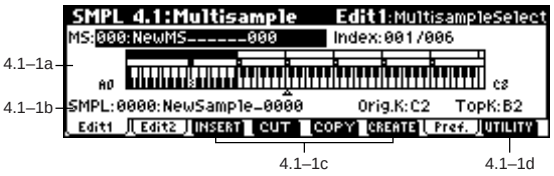
SMPL 4.1: Multisample

Here you can make settings for multisamples. You can create indexes for a multisample, and then assign a sample to each index. (These basic settings can also be performed in 1.1: Recording page.) In addition, you can delete, copy, or insert an index, and perform detailed editing such as adjusting the level and pitch of the sample for each index.

4.1–1: Edit1



4.1–1a: MS, Index, Keyboard & Index

MS (Multisample Select) **[000...999]**

Selects the multisample that you wish to edit (☞1.1–1a).

Index **[xxx (001...128) / yyy (001...128)]**

Select s the index that you wish to edit (☞1.1–1a).
To select an index, hold down the [ENTER] key and play a note on the keyboard. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in "Keyboard & Index."

Keyboard & Index

(☞1.1–1a)

4.1–1b: SMPL, Orig.K, TopK

SMPL (Sample Select)
[----: ---No Assign----, 0000...3999]

This shows the number and name of the sample that is assigned to the selected index. You can also select a sample here (☞1.1–1b).

Orig.K (Original Key) **[C–1...G9]**

Specifies the original key of the sample (☞1.1–1b).

TopK (Top Key) **[C–1...G9]**

Specifies the highest key in the zone of the index. The zone is defined by this "Top Key" (☞1.1–1b).

■ 4.1–1c: INSERT, CUT, COPY, CREATE

INSERT

This creates an index. When you press the [F3] ("INSERT" key, a new index will be created according to the "Pstn (Position)" setting (1.1–3b, 4.1–3a). At this time, the contents of the index that was cut or copied by "CUT" or "COPY" (i.e., the "Zone Range," "Orig.K Position," "Level" and "Pitch") will be assigned at the same time. (The sample will automatically be copied or assigned to a different number.)

If it is not possible to create a new index when you execute "CREATE" or "INSERT," a dialog box will appear. If this occurs, refer to "CREATE" (1.1–1c).

If you have not yet executed "CUT" or "COPY," such as immediately after power-on, the new index will be created according to the "Create (Create Zone Preference)" settings (1.1–3b, 4.1–3a) "Position," "Zone Range," and "Orig.K Position" as same as "CREATE."

CUT

When you press the [F4] ("CUT") key, this deletes the selected index. At the same time, the contents of the deleted index are copied to the "INSERT" buffer.

COPY

When you press the [F5] ("COPY") key, this copies the content of the selected index to the "INSERT" buffer.

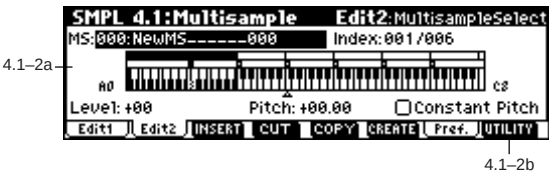
CREATE

This creates an index. When you press the [F6] ("CREATE") key, a new index will be created according to the settings of "Position," "Zone Range," and "Orig.K Position" (1.1–3b, 4.1–3a) (☞1.1–1c).

■ 4.1–1d: UTILITY

☞"Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo / MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1–3f), "Pitch BPM Adj." (4.1–2b)

4.1–2: Edit2



4.1–2a: Level, Pitch, Constant Pitch

Level **[–99...+99]**

Adjusts the playback level of the sample. Use this when you need to adjust the level balance between samples within a multisample.

0: Unity level
–: The level will be lowered. At a setting of **–99** there will be no sound.
+: The level will be raised.

Since in Sampling mode the playback unity level will normally be the maximum level, adjustments in the **+** direction will have no effect. If **Volume (CC#07)** or **Expression (CC#11)** has been assigned to as the B-mode function of a REALTIME CONTROLS knob [1]–[4] and these controllers have been operated, or if these MIDI messages have been received to lower the playback unity level, then adjustments in the + direction will be valid (PROG 2.1–2e Sample Parameter: Level).

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Pitch **[–64.00...+63.00]**

Adjusts the playback pitch of the sample in one-cent steps.

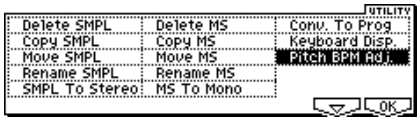
0: The sample will sound at the original pitch when the original key is played.
–: The pitch will be lowered. At a setting of **–12.00** the pitch will be one octave lower.
+: The pitch will be raised. At a setting of **+12.00** the pitch will be one octave higher.
You can also use "Pitch" to make fine adjustments in the length of a rhythm loop. For example with a setting of **+12.00**, the playback speed will be doubled, and the loop playback time will be 1/2.
(☞PROG 2.1–2e Sample Parameter: Pitch)

note The "Pitch BPM Adj." lets you set the playback time in terms of a BPM value (☞4.1–2b).

Constant Pitch **[Off, On]**

On (checked): All notes in the zone of the index will sound at the pitch of the original key. Use this setting when you have sampled a drum sound or a rhythm loop, and want it to always playback at the original pitch.
Off (unchecked): The pitch will change in semitone steps, based on the original key. Use this setting when you have sampled a musical instrument sound etc. and would like to play it conventionally from the keyboard.

■ 4.1–2b: UTILITY



☞"Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo / MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1–3f)

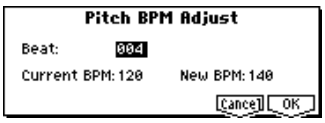
For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Pitch BPM Adj. (Pitch BPM Adjust)

This command sets the "Pitch" (4.1–2a) of the selected index on the basis of a BPM value. Raising the pitch of sample playback will increase the playback speed. Lowering the pitch will slow down the playback speed. This can be used to match the loop length etc. of the sample to a tempo of the desired BPM value.

① Use "SMPL" (4.1–1b) to select the sample that you wish to edit.

② From the Edit2 page "UTILITY," choose "Pitch BPM Adj." to open the following dialog box.



③ Specify "Beat." This is specified in quarter-note beats.

④ "Current BPM" will show the BPM value at the base key (displayed in gray). This BPM value is calculated automatically from the start address to the end address of the sample (if looping is off) or from the loop start address to the end address (if looping is on).
For example if the start and end address of the sample are two seconds apart, the original key is specified as the base key, and "Beat" is set to **4**, "Current BPM" would be **120**. If "Beat" is set to **2**, the display would indicate "Current BPM" as **60**.

It is not possible for this display to exceed the range of **40–480**.

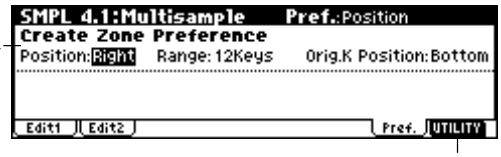
⑤ In "New BPM," specify the BPM value that will result from the conversion of the "Current BPM" value.

⑥ To execute the Pitch BPM Adjust command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key. When you execute this command, the "Pitch" (4.1–2a) value will be set automatically. For example if you modify a quarter-note 120 BPM sample to 240 BPM, the "Pitch" will be set to **+12.00**.

This calculation is performed within the TRITON Le's limits of precision. Minor discrepancies may occur in the final BPM caclulation.

4.1–3: Pref. (Preference)

4.1–3a



4.1–3b

4.1–3a: Create Zone Preference

Here you can specify the default settings for indices that are created using "CREATE" (4.1–1c, 1.1–1c). New indexes will be created according the settings you specify here. You are free to modify the settings of an index later. Also, when you execute "INSERT" (4.1–1c), the "Position" setting specified here will be used (☞1.1–3b).

Position **[Right, Left]**
Range (Zone Range) **[1key...127keys]**
Orig.K Position (Original Key Position) **[Bottom, Center, Top]**

(☞ 1.1–3b: However, the parameter name and value name are shown differently.)

■ 4.1–3b: UTILITY

☞"Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo / MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1–3f), "Pitch BPM Adj." (4.1–2b)

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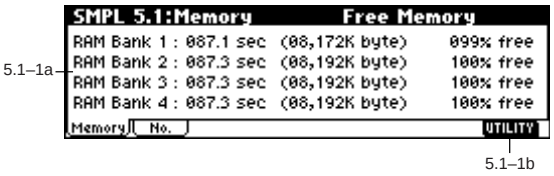
SMPL 5.1: Memory

5.1–1: Memory (Free Memory)



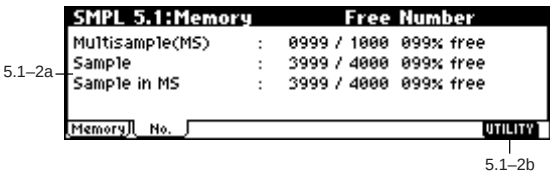
5.1–1a: Free Memory

This shows the remaining amount of memory (the time available for sampling, the size of the sample files that can be loaded in Media mode, or the size available for editing) in RAM banks 1–4. The amount is shown in seconds, bytes, and a percentage (%). The display will depend on the amount of memory that is installed (☞"Bank" 1.1–2a).

■ 5.1–1b: UTILITY

☞"Delete SMPL," "Delete MS" (1.1–3f)

5.1–2: No. (Free Number)



5.1–2a: Free Number

This shows the maximum number of samples available in Sampling mode for multisamples and samples. The remaining number is also shown as a percentage (%) of the maximum.

Multisample(MS) [0000...0999/1000 000...099%]
Sample [0000...4000/4000 000...100%]
Sample in MS [0000...3999/4000 000...099%]

■ 5.1–2b: UTILITY

☞"Delete SMPL," "Delete MS" (1.1–3f)

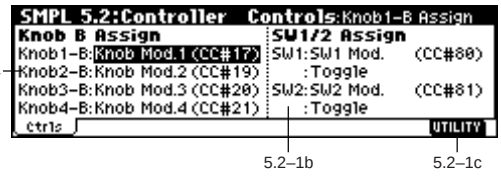
SMPL 5.2: Controller

5.2–1: Ctrls (Controls)

Specifies the functions that the [SW1], [SW2] key, and the B-mode functions of the REALTIME CONTROLS knobs [1]–[4] will have in Sampling mode.

These controllers can be used to make realtime changes in effect dynamic modulation functions etc. while you sample.

In Sampling mode, it is not possible to use AMS to control program parameters.



5.2–1a: Knob B Assign

Here you can assign the B-mode functions (mainly various types of control change) for the front panel REALTIME CONTROLS knobs [1]–[4] (☞p.221 "Realtime Control Knobs B Assign List"). The functions you specify here will operate when the front panel REALTIME CONTROLS knobs [1]–[4] are operated in B-mode.

Knob1–B (Knob1–B Assign) AMSource [Off...MIDI CC#95]
Knob2–B (Knob2–B Assign) AMSource [Off...MIDI CC#95]
Knob3–B (Knob3–B Assign) AMSource [Off...MIDI CC#95]
Knob4–B (Knob4–B Assign) AMSource [Off...MIDI CC#95]

Example settings

Here's how you can assign knob [1] (B-mode) to control the "Wet / Dry" balance of the 44: St / Cross Dly effect selected for IFX, and use knob [2] (B-mode) to control the "Pan" after the IFX in realtime while you sample.

① Set "BUS (IFX) Select" (1.1–3a) to **IFX**.
② Select **44: St/Cross Dly** for "IFX" (7.1–1).
③ Set "IFX On / Off" (7.1–1) to **ON**.
④ Set the IFX page "W / D" setting to **Dry**, "Src" to **Kb1[+]**, and "Amt" to **+50**. " (7.1–2)
⑤ In Knobs B Assign, set "Knob 1–B" to **Knob Mod.1 (CC#17)**, and set "Knob 2–B" to **IFX Pan (CC#08)**.
⑥ Press the [SELECT] key to make the "B" LED light.
⑦ Rotate knob [1], [2] and the panning of the external input sound and the delay level will change. You can sample the sound while you modify it.

5.2–1b: SW1 / 2 Assign

Here you canassign the functions of the [SW1] and [SW2] keys (☞p.220 "SW1, SW2 Assign List").

SW1 (SW1 Assign) AMSource [Off...AfterT Lock :N / A]
SW1 Mode [Toggle, Momentary]
SW2 (SW2 Assign) AMSource [Off...AfterT Lock :N / A]
SW2 Mode [Toggle, Momentary]

(☞PROG 2.2–1b)

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■ 5.2–1c: UTILITY

☞"Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo / MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1–3f)

SMPL 7.1: Insert Effect

Here you can make insert effect settings for use in Sampling mode.
When you set "BUS" (1.1–3a) to **IFX**, the external input sound from the rear panel AUDIO INPUT 1 and 2 jacks will be sent to IFX (insert effect). By selecting insert effect and making settings in this page, you can apply the insert effect to the signal entering through the external input, and sample the result.

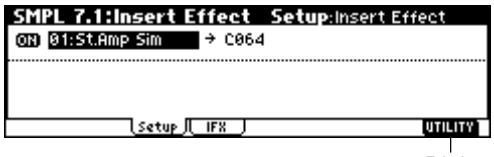
☞For details on insert effect, refer to p.155 "7. Effect Guide."

In Sampling mode, master effects 1 and 2 and the master EQ cannot be used.

note Insertion effect settings in Sampling mode are not backed up when the power is turned off. If you wish to keep the insertion effect settings, you can use "Copy Insert Effect" (7.1–1a).
For example, you can copy the insertion effect settings of Sampling mode to a program or combination in order save them. When you write the program or combination, the settings will be saved in internal memory. In Sampling mode, you can use "Copy Insert Effect" (7.1–1a) to copy these effect settings from the program or combination back into Sampling mode and use them.

7.1–1: Setup

Here you can select insert effects, switch them on / off, make chain settings, and specify the pan of the sound after passing through the insert effect.
These parameters are the same as in Program mode. ☞Program mode "7.1–2: Setup"



7.1–1a

■ 7.1–1a: UTILITY

☞"Copy Insert Effect" (PROG 7.1–1c), "Select by Category" (PROG 7.1–2c)

7.1–2: IFX

Sets the effect parameters for the IFX effect that you selected in the Setup page (☞p.164–).

note Effect Dmod (dynamic modulation) is controlled by the global MIDI channel specified in "MIDI Channel" (GLOBAL 2.1–1a).

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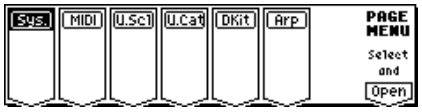
5. Global mode

In Global mode you can make settings that affect the entire instrument, such as master tuning, MIDI, and memory protect. You can also edit user scales, drum kit setups, and user arpeggio patterns.

If you want the settings you make in Global mode to be backed up when the power is turned off, you must write them into memory. To write your settings, use the Utility “Write Global Setting,” “Write Drum Kits,” or “Write Arpeggio Patterns.”
By pressing the [REC / WRITE] key, you can access “Update Global Setting,” “Update Drum Kits,” and “Update Arpeggio Patterns.” These commands will simultaneously write the edited content..

GLOBAL PAGE MENU

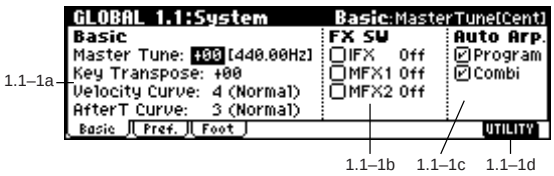
For details on selecting pages and parameters, refer to Program mode “PROGRAM PAGE MENU” p.1.



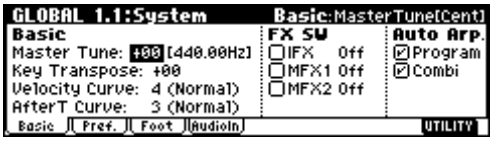
Sys.	1.1: System	Basic settings for the entire TRITON Le, and controller settings such as the pedals connected to the rear panel. AUDIO INPUT settings used outside of Sampling mode when the separately sold EXB-SMPL option is installed. (☞p.121)
MIDI	2.1: MIDI	MIDI settings for this instrument. (☞p.127)
U.Scl	3.1: User Scale	Scale settings created by the user. You can specify 16 types of octave scale, and one full-range scale. (☞p.130)
U.Cat	4.1: Category Name	Edit category names for programs and combinations. (☞p.131)
DKit	5.1: DKit	Edit drum kits. (☞p.132)
Arp	6.1: Arp.Pattern	Edit user arpeggio patterns. (☞p.135)

GLOBAL 1.1: System

1.1–1: Basic



If the EXB-SMPL (sold separately) option is installed, the 1.1–4: AudioIn (Audio In) page will be added.



1.1–1a: Basic

Master Tune (Master Tune [Cent]) [–50cent (427.47Hz)...+50cent (452.89Hz)]

This adjusts the overall tuning of this instrument in one-cent units (semitone = 100 cents) over a range of **±50** cents. With a setting of **0**, the frequency of A4 will be 440 Hz.

The A4 pitch given here is when **Equal Temperament** is selected as the scale. If a different scale is selected, A4 may not be 440 Hz.

Key Transpose [–12...+12]

his adjusts the pitch in semitone steps over a **±1** octave range.
This setting is applied at the location (**PreMIDI** or **PostMIDI**) specified by “Convert Position” (2.1–1a).

Note number transmitted

Transpose	–12	0	+12
Note number	24...84 (C1...C6)	36...96 (C2...C7)	48...108 (C3...C8)

MIDI “Master Tune” can be controlled by the MIDI universal system exclusive message Master Fine Tuning (F0, 7F, nn, 04, 03, vv, mm, F7: nn=MIDI channel, vv / mm= value).
“Key Transpose” can be controlled by the MIDI universal system exclusive message Master Coarse Tuning (F0, 7F, nn, 04, 04, vv, mm, F7: nn=MIDI channel, vv / mm=value).
These messages are received on the global MIDI channel specified by “MIDI Channel” (2.1–1a).

In Program, Combination and Sequencer modes, MIDI RPN fine tuning messages can be received to adjust the tuning of the program, the timbres (in Combination mode), or the tracks (in Sequencer mode) relative to the Global mode “Master Tune” setting.
In Program mode, MIDI RPN fine tune messages will be received on the global MIDI channel that you specified for “MIDI Channel” (2.1–1a). In other modes, MIDI

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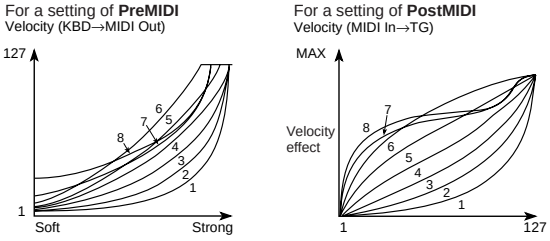
RPN fine tune messages will be received on the MIDI channel for each timbre (in Combination mode) or track (in Sequencer mode). (☞"Detune," "Transpose": COMBI 3.1–3a, SEQ 3.1–5(6)a.)

Velocity Curve [1…8]

This specifies the way in which the volume and / or tone will change in response to how hard the keyboard is struck (velocity).

When "Convert Position" (2.1–1a) is **PreMIDI**, variations in keyboard playing dynamics will affect the velocity effect and the transmitted velocity data as shown in the left-hand diagram on the following page. Incoming data will automatically use the velocity curve number **4** shown in the right-hand diagram.

With a setting of **PostMIDI**, variations in keyboard playing dynamics and in the velocity of incoming data will create change as shown in the right-hand diagram on the following page. If you are playing this instrument's tone generator from an external keyboard or sequencer, and the overall sound is too bright or too dark, you can set the "Convert Position" parameter to **PostMIDI** and select the appropriate velocity curve here. For the transmitted data, the velocity curve number **4** shown in the left-hand diagram will automatically be selected.

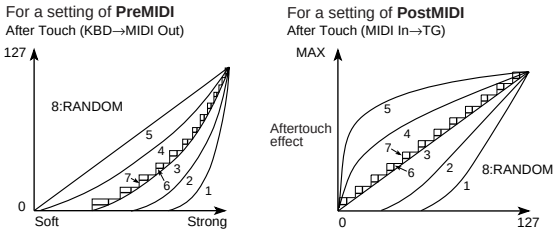


1...3: These curves produce an effect for strongly-played notes.
4(Normal): This is the standard curve.
5, 6: An effect will be obtained even if you do not play very strongly
7: A certain amount of effect will be obtained even for softly-played notes
8: This curve produces the most regular effect. This setting is suitable when you do not need velocity sensitivity, or when you wish to make the notes more consistent. However with this curve, control of softly-played notes will be more difficult, so use the curve that is most appropriate for your playing strength and style, and the effect that you wish to produce.
The default factory setting for this parameter is **4**.

AfterT Curve (AfterTouch Curve)

This specifies the way in which the volume and / or tone will change in response to variations in pressure (after touch) applied to the keyboard while holding down a key.

When "Convert Position" (2.1–1a) is **PreMIDI**, variations in after touch pressure will affect the after touch effect and the transmitted after touch data as shown in the left-hand diagram below. Incoming data will automatically use the after touch curve number **3** shown in the right-hand diagram.
With a setting of **PostMIDI**, variations in after touch pressure and in the value of incoming after touch data will create change as shown in the right-hand diagram. For the transmitted data, the after touch curve number **3** shown in the left-hand diagram will automatically be selected.



1, 2: These curves produce an effect for strongly-applied pressure.
3(Normal): This is the standard curve.
4, 5: This curve produces change even when light pressure is applied
6, 7: Since these will change in 24 and 12 levels respectively, they are suitable for use when you are recording aftertouch on a sequencer and want to limit memory consumption. (Set "Convert Position") to **PreMIDI**.) Curve number **7** allows change over twelve steps, so when using after touch to modify the pitch, you can set the range of modification to one octave, and use after touch to vary the pitch in semitone steps.
8: This is a random curve. Use this when you wish to create special effects, or to use after touch to apply unpredictable modulation.
The default factory setting for this parameter is **3**.

MIDI When "Convert Position" (2.1–1a) is **PreMIDI**, the setting you make here will be applied immediately after the keyboard, meaning that it will affect the data transmitted via MIDI, but will not affect the received data.

With a setting of **PostMIDI**, the setting you make here will be applied immediately before this instrument's internal tone generator, meaning that it will affect the data received via MIDI, but will not affect the transmitted data.
When you use this instrument's keyboard to play the internal tone generator, the "Convert Position" setting will make no difference.

1.1–1b: FX SW

IFX Off [Off, On]

On (checked): Insert effect IFX will be disabled.
Off (unchecked): The Setup page (PROG / COMBI 7.1–2, SEQ 7.1–3, SMPL 7.1–1) "IFX On / Off" setting of Program, Combination, Sequencer, and Sampling (if the EXB-SMPL option is installed) modes will be valid.

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MFX1 Off [Off, On]

On (checked): MFX1 will be disabled.
Off (unchecked): The Master Effect Setup page (7.2–1) "MFX1 On / Off" settings of Program, Combination, and Sequencer mode will be valid.

MFX2 Off [Off, On]

On (checked): MFX2 will be disabled.
Off (unchecked): The Master Effect Setup page (7.2–1) "MFX2 On / Off" settings of Program, Combination, and Sequencer modes will be valid.

MIDI When "IFX On / Off," or "MFX1 On / Off," "MFX2 On / Off" settings are switched, control change messages CC#92 (effect control 2), CC#94 (effect control 4), and CC#95 (effect control 5) will be transmitted respectively. The transmitted data will be 0 for off, and 127 for on.

1.1–1c: Auto Arp. (Auto Arpeggiator)

Program (Auto Arp. Program) [Off, On]

On (checked): When a different program is selected, the arpeggiator settings stored in that program will automatically take effect.
Off (unchecked): The arpeggiator settings will not change when the program is switched. Use this setting when you wish to keep the same arpeggiator pattern running while you select different program sounds.

Combi (Auto Arp. Combi) [Off, On]

On (checked): When a different combination is selected, the arpeggiator settings stored in that combination will automatically take effect.
Off (unchecked): The arpeggiator settings will not change when the combination is switched. Use this setting when you wish to keep the same arpeggiator pattern running while you select different combination sounds.

■ 1.1–1d: UTILITY

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Write Global Setting

This command writes Global mode settings (except for Drum Kits and User Arpeggio Patterns).

① Select "Write Global Setting" to access the dialog box.

② To write the data, press the [F8] ("OK") key. To cancel without writing, press the [F7] ("Cancel") key.
You can also use the [REC / WRITE] key to write data in the same way as the "Write Global Setting" command. Press the [REC / WRITE] key to access the "Update Global Setting" dialog box, and press the [F8] key to write the data.

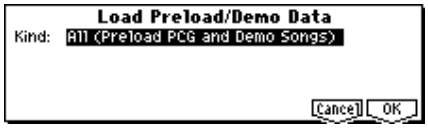
To write a drum kit or user arpeggio pattern, execute the appropriate utility. (☞5.1–1d "Write Drum Kits," 6.1–1d "Write Arpeggio Patterns")

Load Preload / Demo Data

This command loads the preloaded data and demo song data into internal memory. (☞VNL)

Before loading this data, you must uncheck the "Memory Protect" (1.1–2b) setting for the data that you want to load. If the setting is still checked when you attempt to load the data, a dialog box will indicate "Memory Protected," and it will not be possible to load the data.

① Select "Load Preload / Demo Data," and access the dialog box.



② In the "Kind" field, select the data that you want to load.

All (Preload PCG and Demo Songs)	All PCG (programs, combinations, drum kits, user arpeggio patterns, global settings), and demo song data
All Preload PCG	All PCG (programs, combinations, drum kits, user arpeggio patterns, global settings) data
All Demo Songs	All demo song data
Program All	All program data
Program Bank	All program data of a bank
Program Single	Data for one selected program
Combination All	All combination data
Combination Bank	All combination data of a bank
Combination Single	Data for one selected combination
DrumKit All	All drum kit data
DrumKit Single	Data for one selected drum kit
Arpeggio Pattern All	All arpeggio pattern data
Arpeggio Pattern Single	Data for one selected arpeggio pattern
Global Setting	Global setting data

If you selected **Program** or **Combination**, move the cursor down and select **All**, **Bank**, or **Single** to specify the range of data that will be loaded.
All: Data for all programs or combinations will be loaded.
Bank: Data will be loaded in units of one bank. In this case, move the cursor down and select the bank whose data you want to load.
Single: Data for one program or combination will be loaded. In this case, move the cursor down to select the data that you want to load.
If you selected **DrumKit** or **Arpeggio Pattern**, move the cursor down and select either **All** or **Single** to specify the range of data that will be loaded.
All: Data for all drum kits or arpeggio patterns will be loaded.
Single: Data for one drum kit or arpeggio pattern will be loaded. In this case, move the cursor down to select the data that you want to load.

③ If you are loading in units of **Bank** or **Single**, use the "To" field to select the loading destination.

④ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

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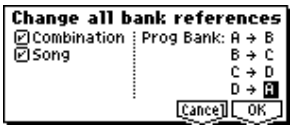
note If you turn on the power while holding down the [MENU] key and [EXIT] key, the “Load All (Preload PCG and Demo Songs)” operation will be executed automatically (the LCD will display a message of “Now Writing Internal Memory”), and all PCG data and demo song data will be loaded.

Change all bank references

This command changes all program banks specified for timbres in combinations or tracks of songs.

① Select “Change all bank references” to access the dialog box.



② To execute this command for combinations, **check** “Combi.” To execute this command for songs, **check** “Song.” If you **check** “Song,” the program banks within the event data of the multis will also be changed.

③ Specify the banks to be changed (“Program Bank”).

④ To execute the Change All Bank References command, press the [F8] (“OK”) key. To cancel without executing, press [F7] (“Cancel”) key.

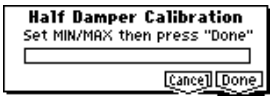
If you change two or more different banks to the same bank, it will not be possible to use this function to change them back to different banks. Be careful that the change destination banks do not overlap.

Half Damper Calibration

If a damper pedal that supports half damper (the separately sold DS–1H option) is connected to the rear panel DAMPER jack, here’s how you can adjust the sensitivity if the damper effect is not applied appropriately.

① Connect the half damper pedal to the DAMPER jack.

② Select “Half Damper Calibration” to access the dialog box.



③ Press the half damper pedal, and then release the pedal.

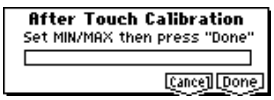
④ Press the F8 (“Done”) key.
If the adjustment could not be performed correctly, an error message will appear. Please repeat the procedure.

Since the operation of the half damper pedal is delicate, please use the separately sold DS–1H option. If any other pedal is used, the correct effect may not be obtained, or adjustment may not be possible.

After Touch Calibration

If the aftertouch effect depth does not function appropriately, you can adjust the sensitivity. Perform the following adjustment if the sensitivity of the aftertouch effect is not correct, such as when aftertouch fails to reach the maximum value.

① Select “After Touch Calibration” to access the dialog box.

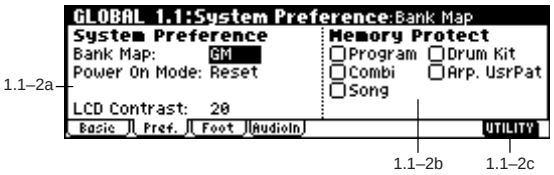


② Press down a single key for which the aftertouch effect depth does not correctly, and then release it.

③ Press the F8 (“Done”) key. If the adjustment could not be performed correctly, an error message will appear, so please repeat the operation.

The depth of the aftertouch effect may differ slightly from key to key.

1.1–2: Pref. (System Preference)



1.1–2a: System Preference

Bank Map [KORG, GM]

Specifies the mapping of programs and combinations relative to Bank Select control change messages (CC#0 upper byte and CC#32 lower byte).
The bank select messages shown in the following table can be received (R) or transmitted (T), corresponding to Program banks A...D, banks G, g(d) and Combination banks A...C.

Bank	Bank Map: KORG	Bank Map: GM
Bank A	00. 00 R/T	63. 00 R/T
Bank B	00. 01 R/T	63. 01 R/T
Bank C	00. 02 R/T	63. 02 R/T
Bank D	00. 03 R/T	63. 03 R/T
Bank G	121. 00, 121. 01…09 R/T	121. 00, 121. 01…09 R/T
	56. 00 R	56. 00 R 00. 00, 00. 01...(XG) R 00. 00, 01. 00...(GS) R
Bank g (d)	120. 00 R/T	120. 00 R/T
	62. 00 R	62. 00 R
		63. 127 R (→Korg MUTE)

Value: decimal, R: Receive, T: Transmit

Power On Mode [Reset, Memorize]

Specifies the condition at power-on.
Reset: This instrument will be in Combination mode COMBI 1.1: Play, and Combination A000 will be selected.
Memorize: The location (mode and page) where you were when the power was last turned off, and the last-selected program or combination number will be selected.

The contents of any parameters that were being edited are not saved by this function. Before turning the power off, you must Write your edits, or after writing save them in Media mode.

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LCD Contrast [0…62]

This sets the contrast of the LCD screen.
Higher values will increase the contrast.

note If because of the temperature or other reasons, the LCD screen is unreadable when the power is turned on, use the following procedure to adjust the contrast.

① Press the [EXIT] key three times, and then press the [GLOBAL] key.

② Hold down the [EXIT] key, and press the [REC / WRITE] key.

③ Use the [VALUE] dial to adjust the setting.

1.1–2b: Memory Protect

This setting also applies to Load Preload / Demo Data (1.1–1d). Loading will not be possible if protect is specified for even one of the types of data selected for loading in "Kind" (☞p.123).

Program [Off, On]

This setting protects the internal program memory.

On (checked): Internal program memory will be protected, and the following write operations cannot be performed.

- Writing a program
- Receiving program data via MIDI data dump
- Loading program data from SmartMedia

Off (unchecked): Data can be written to internal program memory.

Combi (Combination) [Off, On]

This setting protects the internal combination memory.

On (checked): Internal combination memory will be protected, and the following write operations cannot be performed.

- Writing a combination
- Receiving combination data via MIDI data dump
- Loading combination data from SmartMedia

Off (unchecked): Data can be written to internal combination memory.

Song [Off, On]

This setting protects the internal song memory.
However, when the power is turned off, the song data in song memory will be lost regardless of this setting.

On (checked): Internal song memory will be protected, and the following write operations cannot be performed.

- Recording to the sequencer
- Receiving song data via MIDI data dump
- Loading song data from SmartMedia
- Saving template songs in Sequencer mode

Off (unchecked): Data can be written to internal song memory.

Drum Kit [Off, On]

This setting protects the internal drum kit memory.

On (checked): Internal drum kit memory will be protected, and the following write operations cannot be performed.

- Writing a drum kit
- Receiving drum kit data via MIDI data dump
- Loading drum kit data from SmartMedia

Off (unchecked): Data can be written to internal drum kit memory.

Arp. UsrPat (Arp. User Pattern) [Off, On]

This setting protects the internal user arpeggio pattern memory.

On (checked): Internal user arpeggio pattern memory will be protected, and the following write operations cannot be performed.

- Writing an user arpeggio pattern
- Receiving user arpeggio pattern data via MIDI data dump
- Loading user arpeggio pattern data from SmartMedia

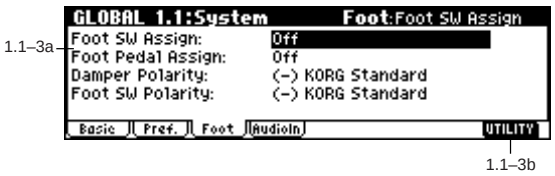
Off (unchecked): Data can be written to internal user arpeggio pattern memory.

■ 1.1–2c: UTILITY

☞"Write Global Setting," "Load Preload / Demo data," "Change all bank references," "Half Damper Calibration," "After Touch Calibration" (1.1–1d)

1.1–3: Foot

Specify the polarity and function of a switch or pedal connected to the rear panel.



1.1–3a: Damper / Assignable Foot Switch, Pedal

Foot SW Assign [Off...Cue Repeat Control]

Select the function that will be controlled by a pedal switch (PS-1 option [sold separately]) connected to the rear panel ASSIGNABLE SWITCH jack (☞p.222 "Foot Switch Assign List").

Foot Pedal Assign [Off...MFX Send 2(CC#91)]

Indicates the function that will be controlled by a foot volume pedal (XVP-10 or EXP-2 option [sold separately]) connected to the rear panel ASSIGNABLE PEDAL jack (☞p.223 "Foot Pedal Assign List").

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Damper Polarity **[(–) KORG Standard, (+)]**

Set this to match the polarity of the damper pedal connected to the rear panel DAMPER jack.
If a Korg DS-1H (sold separately) damper pedal is connected, the pedal switch polarity will be (↓), so select "**(–) KORG Standard**" for this setting. If you have connected a damper pedal with a positive (↑) polarity, select "**(+)**" for this setting. (↓ is open-type, ↑ is closed-type.) If the polarity does not match, operating the damper pedal will not produce the correct result. If no damper pedal is connected, set this to "**(–) KORG Standard**."

Foot Switch Polarity **[(–) KORG Standard, (+)]**

Set this to match the polarity of the pedal switch connected to the rear panel ASSIGNABLE SWITCH jack.
If a Korg PS-1 (sold separately) pedal switch is connected, the pedal switch polarity will be (↓), so select "**(–) KORG Standard**" for this setting. If you have connected a pedal switch with a positive (↑) polarity, select "**(+)**" for this setting. (↓ is open-type, ↑ is closed-type.) If the polarity does not match, operating the pedal switch will not produce the correct result. If no pedal switch is connected, set this to "**(–) KORG Standard**."

■ 1.1–3b: UTILITY

☞"Write Global Setting," "Load Preload / Demo data," "Change all bank references," "Half Damper Calibration," "After Touch Calibration" (1.1–1d)

1.1–4: AudioIn (Audio In)

This page will be displayed (and will be operable) only if the EXB-SMPL is installed.

If the EXB-SMPL option (sold separately) is installed, you can use Sampling mode to record an external analog audio source while applying the insert effect to it. In other modes, the insert effect, master effects, and master EQ can be applied to the external analog audio signal, allowing you to use the TRITON Le as a 2-in 4-out effect processor, or to use external sounds in conjunction with internal sounds.

The settings here are valid for Combination, Program, and Sequencer modes, and will determine the input, level, pan, bus, and master effect send levels from rear panel AUDIO INPUT 1 and 2.

These settings will have no effect in Sampling mode. If you move from Sampling mode to Global mode, the "Audio Input" settings of Sampling mode will be maintained, and it will not be possible to view settings. Please move here from a mode in which external audio signals can be input (Combination, Program, or Sequencer mode). In Sampling mode, the rear panel AUDIO INPUT 1 and 2 settings can be made in the same way as here, using the parameters in "Input1," "Input2" (SMPL 1.1–3). In Sampling mode, you can record while applying insert effect to the external audio source that is input from AUDIO INPUT 1 and 2. (The master effects and master EQ cannot be used.)

1.1–4a: Input1
1.1–4b: Input2

Level (Input Level) **[0...127]**

The analog audio signal from AUDIO INPUT 1 and 2 is converted by an AD converter from an analog signal to a digital signal. This parameter sets the signal level immediately after the sound has been converted into a digital signal. Normally you will set this to **127**. If the sound is still distorted even after this level is lowered significantly, it is possible that the sound is distorting before the AD converter. Adjust the [LEVEL] knob or the output level of the external audio source.

Pan (Input Pan) **[L000...C064...R127]**

Sets the panning of the signal from AUDIO INPUT 1 and 2. When inputting a stereo audio signal, you will normally set Input 1 to **L000** and Input 2 to **R127** (or, Input 1 to **R127** and Input 2 to **L000**). When inputting a monaural audio signal, normally set this to **C064**.

BUS(IFX / Indiv.) Select (Input BUS Select) **[L / R, IFX, 1, 2, 1 / 2, Off]**

In the same way as for the oscillators of a program, this parameter specifies the bus to which the external input of AUDIO INPUT 1 and 2 will be sent (☞7. Effect Guide, Insert Effect "2–4. Audio Input").

Send1(Input Send1), Send2(Input Send2) **[000...127]**

In the same way as for the oscillators of a program, this parameter specifies the send levels from the external input of AUDIO INPUT 1 and 2 to the master effects. If "BUS (IFX / Indiv.) Select" is set so that an insert effect is being applied to the external input, the send levels to the master effects are set after the signal passes through IFX by "S1 (Send1(MFX1)," "S2 (Send2(MFX2)" (7.1–2). (☞7. Effect Guide, Master Effect "2–4. Audio Input.")

When the "BUS (IFX / Indiv.) Select" setting is other than **Off** and the "Level" value is raised, the external input sound will be input to the TRITON Le. If audio cables are connected to the rear panel AUDIO INPUT 1 and 2 jacks at this time, noise will be input (even if there is no incoming audio signal) into the TRITON Le, and, depending on your settings, in some cases may be output from the AUDIO OUTPUT L / MONO, R, 1, 2 jacks. If you are not using an external audio input source, and are only playing programs, combinations, or songs etc. that use the TRITON Le's internal sounds, turn "BUS (IFX / Indiv.) Select" **Off**, or set "Level" to **0**.
If audio cables are not connected to the rear panel AUDIO INPUT 1 and 2 jacks, the input data that passes from the AD converter into the TRITON Le will be forced to zero, so that no noise will be input.

■ 1.1–3c: UTILITY

☞"Write Global Setting," "Load Preload / Demo data," "Change all bank references," "Half Damper Calibration," "After Touch Calibration" (1.1–1d)

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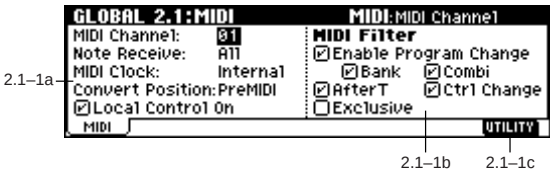
GLOBAL 2.1: MIDI

2.1–1: MIDI

Here you can make MIDI-related settings that affect this instrument.



2.1–1a: MIDI Setup

MIDI Channel [1…16]

Sets the global MIDI channel.

The global MIDI channel is used in the following cases.

- When transmitting and receiving performance data in Program mode (PROG 1.1: Play) and Sampling mode (if the EXB-SMPL option is installed).
- When selecting combinations via MIDI in Combination mode (COMBI 1.1: Play).
- When controlling timbres or effects that have been set to **Gch** in various modes
- When transmitting and receiving system exclusive messages

About MIDI reception

In Program mode (PROG 1.1: Play) and Sampling mode (if the EXB-SMPL option is installed), MIDI data is received on the global MIDI channel, but in Combination mode (COMBI 1.1: Play) or Sequencer mode, MIDI data is received on the MIDI channel specified for each timbre or track.
In Combination mode (COMBI 1.1: Play), program changes received on the global MIDI channel will switch the combination.
Use the global MIDI channel to switch IFX , MFX1 and MFX2 on / off. To control the pan following IFX, sends 1 / 2, MFX 1 / 2 and MEQ, use the global MIDI channel in Program mode; in Combination, or Sequencer mode, use the channel specified separately by "Control Channel" for IFX, MFX1, MFX2, and MEQ. By setting "Control Channel" to **Gch**, you can control these parameters from the global MIDI channel.

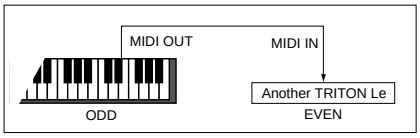
MIDI transmission when this instrument's controllers are operated

In Program mode and Sampling mode (if the EXB-SMPL option is installed), this data will be transmitted on the global MIDI channel. In Combination mode, data will be transmitted simultaneously on the global MIDI channel and on the MIDI channels of timbres whose "Status" (COMBI 3.1–1) is set to **EXT** or **EX2**.
In Sequencer mode, musical data will be transmitted on the channel specified for the currently selected track (whose "Status" is **BTH**, **EXT**, or **EX2**).

Note Receive [All, Even, Odd]

This setting specifies which of the note messages played on this instrument's keyboard or received via MIDI will be sounded. If you connect another TRITON Le unit to this instrument in order to increase the total polyphony, set one unit to **Even** and the other to **Odd**, and set both units to sound.

All: All note numbers will be received. Normally you will leave this set to **All**.
Even: Even-numbered notes (C, D, E, F#, G#, A#) will sound.
Odd: Odd-numbered notes (C#, D#, F, G, A, B) will sound.



MIDI This setting has no effect on the MIDI data that is received.

MIDI Clock [Internal, External]

Set this parameter when you wish to synchronize an external MIDI device (sequencer or rhythm machine etc.) with the TRITON Le's internal arpeggiator or sequencer.

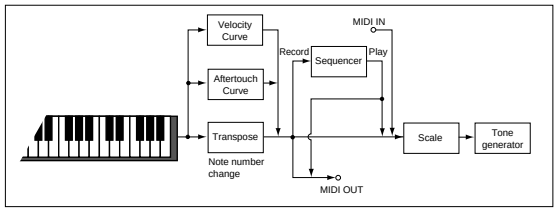
Internal: The internal arpeggiator and sequencer will synchronize to the TRITON Le's own internal clock.
Select the **Internal** setting when using the TRITON Le by itself, or when you want the TRITON Le to be the **master** (controlling device) so that another connected external MIDI device will synchronize to the MIDI Clock messages transmitted from the TRITON Le.
External: The arpeggiator and sequencer of the TRITON Le will synchronize to MIDI Clock messages transmitted from an external MIDI device connected to the MIDI IN connector.
Use the **External** setting when you are using this instrument as a **slave** (controlled device) that synchronizes to the MIDI Clock messages received from an external MIDI device. This instrument will respond to MIDI real-time messages (Start, Stop, Continue, Song Select, Song Position Pointer) from an external sequencer.

Audition playback will occur at the pre-specified tempo, regardless of the "MIDI Clock" setting.

Convert Position [PreMIDI, PostMIDI]

This setting specifies the location at which the Transpose, Velocity Curve, and After Touch Curve settings will be applied. This setting will affect the MIDI data that is transmitted and received, and the data that is recorded on the internal sequencer.
When using this instrument's keyboard to play the internal tone generator, the Transpose, Velocity Curve, and After Touch Curve settings will always take effect regardless of this setting.

PreMIDI: Velocity Curve, After Touch Curve, and Transpose will be applied to the data that is transmitted from this instrument's keyboard.
This means that the Velocity Curve, After Touch Curve, and Transpose settings will affect the data that is transmitted from MIDI OUT when this instrument's keyboard is played, and the data that is recorded on the internal sequencer. MIDI data received from MIDI IN or the data played back by the internal sequencer will not be affected.



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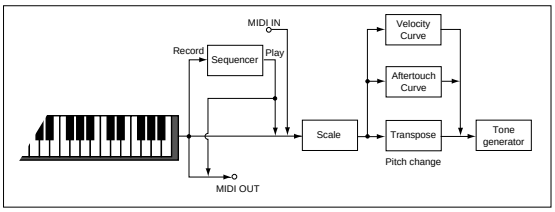
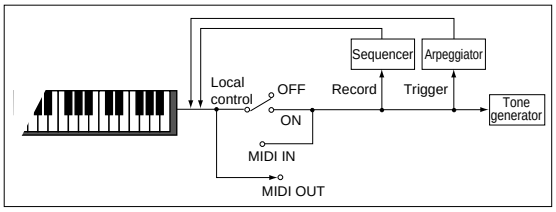
PostMIDI: Velocity Curve, After Touch Curve, and Transpose will be applied to data before it enters the tone generator.
This means that the Velocity Curve, After Touch Curve, and Transpose settings will affect the data that is sent to the internal tone generator when you play this instrument's keyboard, when the internal sequencer is played back, or when data is received from MIDI IN.
This setting will not affect the data that is transmitted from MIDI OUT or recorded on the internal sequencer when you play this instrument's keyboard or playback the sequencer.



Local Control On [Off, On]

On (checked) Local Control On: The keyboard, joystick, REALTIME CONTROLS knobs [1]–[4], [SW1], and [SW2] keys of this instrument will controls its internal tone generator.
Off (unchecked) Local Control Off: The keyboard, joystick, and REALTIME CONTROLS knobs [1]–[4] etc. of this instrument will be disconnected from the internal tone generator. This means that operating this instrument (using the keyboard or joystick to perform, or playing the sequencer) will not produce sound.
Uncheck this setting if the echo-back from an external sequencer causes this instrument to sound in duplicate.

MIDI Even if this is unchecked, MIDI transmission and reception will occur as usual. Note messages will be transmitted when you play the keyboard, and this instrument's tone generator will sound when note messages are received.



2.1–1b: MIDI Filter

Enable Program Change [Off, On]

On (checked): Program changes will be transmitted and received.
In Program mode (PROG 1.1: Play), the program will be switched when a program change message is received on the global MIDI channel specified by "MIDI Channel" (2.1–1a). When you switch programs, a program change message will be transmitted on the global MIDI channel.

In Combination mode (COMBI 1.1: Play), the combination will be switched when a program change message is received on the global MIDI channel. However, it is possible to set the "Combi (Combi Change)" parameter so that the combination is not switched. When a program change is received on the channel specified for each timbre by "MIDI Channel" (COMBI 3.1–1a), the program of that timbre will be switched. However, the program changes for each timbre will be affected by the setting of the "Program Change" parameter (COMBI 4.1–1a).
When you switch combinations, a program change message will be transmitted on the global MIDI channel, and also transmitted simultaneously on the channel of timbres whose "Status" (COMBI 3.1–1a) is set to **EXT** or **EX2**.

In Sequencer mode, incoming program change messages on a channel that corresponds to a track whose "Status" (SEQ 3.1–1(2)a) is set to **INT** or **BTH** will switch programs on that track. When you select a song or playback song data will be transmitted on the channels of tracks whose "Status" is set to **BTH**, **EXT**, or **EX2**.
Off (unchecked): Program changes will not be transmitted or received.

Bank (Bank Change) [Off, On]

On (checked): The Bank Select control change message will be transmitted together with program change messages. This is valid when "Enable Program Change" is checked.
Off (unchecked): Bank Select messages will not be transmitted or received.

When recording on the internal sequencer, bank select messages will be recorded regardless of this setting. However for playback, this setting will apply.

Combi (Combi Change) [Off, On]

On (checked): When in COMBI 1.1: Play, an incoming program change message on the global MIDI channel set by "MIDI Channel" (2.1–1a) will switch combinations. This is valid when "Enable Program Change" is checked. An incoming program change on a channel other than the global MIDI channel will switch the program of any timbre that matches that MIDI channel.
Off (unchecked): An incoming program change message on the global MIDI channel will switch the program of any timbre whose "MIDI Channel" (COMBI 3.1–1a) matches the global MIDI channel. The combination will not be switched. The program changes for each timbre will be affected by the setting of the "Program Change" parameter (COMBI 4.1–1a).

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AfterT (After Touch) [Off, On]

On (checked): MIDI after touch messages will be transmitted and received.
Off (unchecked): MIDI after touch messages will neither be transmitted nor received.
When recording sounds that do not require the use of after touch, you can uncheck this parameter to save memory.
This setting has no effect when you use the internal sequencer to playback sequence data that was recorded with after touch data; i.e., after touch will be transmitted via MIDI.
This instrument's keyboard transmits only channel after touch; it does not transmit polyphonic after touch. However, since this instrument does support polyphonic after touch as an Alternate Modulation Source (AMS), it can receive polyphonic after touch to control individual notes.

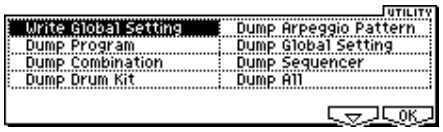
Ctrl Change (Control Change) [Off, On]

On (checked): Control change messages will be transmitted and received.
Off (unchecked): Control change messages will neither be transmitted nor received.
This setting has no effect when you use the internal sequencer to playback sequence data that was recorded with control change data; i.e., control changes will be transmitted via MIDI.

Exclusive [Off, On]

On (checked): System exclusive data will be transmitted and received. Check this setting when you wish to use a connected computer etc. to edit this instrument, or vice versa.
Off (unchecked): System exclusive data will neither be transmitted nor received. Normally you will leave this unchecked.
However, system exclusive data will be transmitted and received while the page menu commands (""Dump Program"–"Dump All") of this page are displayed.

■ 2.1–1c: UTILITY



☞"Write Global Setting" (1.1–1d)

Dump Program
Dump Combination
Dump Drum Kit
Dump Arpeggio Pattern
Dump Global Setting
Dump Sequencer
Dump All

These commands allow this instrument's data to be transmitted to another connected **TRITON Le**, MIDI data filer, or computer in the form of system exclusive data.

Selects the data to be dumped from the Utility menu (see the table below) to access the dialog box.
As necessary, select the bank and number of the data to be dumped, and press [F8] ("OK") key.

Dump Program	Programs of all banks, programs of the specified bank, one program
Dump Combination	Combinations of all banks, combinations of the specified bank, one combination
Dump Drum Kit	All drum kits, One drum kit
Dump Arpeggio Pattern	All arpeggio patterns, One arpeggio pattern
Dump Global	Global settings (except for the Drum Kits and User Arpeggio Patterns of Global mode)
Dump Sequencer	All sequences
Dump All	All banks of programs + combinations + drum kits + arpeggio patterns + global settings + sequences

Transmission

Do not touch this instrument's switches or turn off the power while data is being transmitted.

Data dump transmission procedure

① Connect this instrument to the device that will receive the data dump.
If you are using a computer that is able to receive MIDI exclusive data, connect the computer's MIDI interface (connected to the computer) to the MIDI OUT connector of this instrument. (☞p.229)
If you are using a MIDI data filter etc., connect this instrument's MIDI OUT connector to the MIDI IN connector of the MIDI data filter.

② Select 2.1: MIDI.

③ In the Utility menu, select the data that you wish to dump.
Shown below the "Dump Program" screen.
If you wish to dump all program data, set "Program" to **All**.
If you wish to dump data for an individual bank, set "Program" to **Bank**, and specify the bank number below it. If you wish to dump data for an individual program, set "Program" to **Single**, and specify the program number below it.

④ Press the [F8] ("OK") key to transmit the data.
While the data is being transmitted, the display will indicate "Now transmitting data."
The data size and the time required for transmission will depend on the type of data.
For the size and the time required to dump each type of data, refer to the table below.

Type of data dumped	Data size (kByte)	Time required (Sec)
Program All	260.2	83.3
Program Bank (A/B/C/D)	65.0	20.8
Program Single (A/B/C/D)	0.5	0.2
Combination All	154.5	49.5
Combination Bank (A/B/C)	51.5	16.5
Combination Single (A/B/C)	0.4	0.2
Drum Kit All	112.8	36.1
Drum Kit Single	4.7	1.6
Arpeggio Pattern All	79.0	25.3
Arpeggio Pattern Single	0.4	0.2
Global Setting	1.0	0.4
Sequencer Data	10.5–1371	3.4–438.8
All	617.6–1772.3	197.7–567.2

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When you save data dumps from this instrument to a MIDI data filer, do not save multiple data dumps together. If this data is saved together, there will be insufficient time for this instrument to write each received portion into memory before the next portion of data arrives, so that it will be impossible to receive all of the data correctly.

Reception

Do not touch this instrument's switches or turn off the power while data is being received.

Before receiving data, we recommend that you close the various dialog boxes, page menus, or utility commands (with the exception of the "Receive and Save MIDI Exclusive Data" dialog box (MEDIA 1.1–2a: Save Exclusive). It is not possible to receive dump data in the Sequencer mode SEQ 2.1: CUE List page when you have pressed the [F7] ("EDIT") key and are editing the cue list. In this case, you must press the [F7] ("DONE") key and exit cue list editing if you need to receive data.

After a data dump is received, this instrument will require up to 20 seconds to process the data and write it into memory. During this time, the display will indicate "Now writing into internal memory." While this display is shown, you must under no circumstances turn off the power of this instrument. If the power is turned off during this time, this instrument may fail to operate correctly when the power is turned on again. If this occurs, hold down the [MENU] key and the [9] key while you turn on the power. However when this is done, the contents of memory will be initialized.

Transmission and reception of MIDI data is also impossible during this time. When receiving multiple data dumps in succession, you must allow an interval between the transmission of each data dump. (☞refer to the table below)

Processing time for writing into memory

Type of data dumped	Processing time for writing into memory
All	Approximately 20 seconds
All Programs	Approximately 8 seconds
One Program Bank	Approximately 2 seconds
All Combinations	Approximately 3 seconds
One Combination Bank	Approximately 2 seconds
All Drum Kits	Approximately 3 seconds
All Arpeggio Patterns	Approximately 2 seconds
Global Setting	Approximately 1 seconds
Sequencer	Approximately 1 second

While this instrument is writing the data into memory, transmission of Active Sensing (FEh) messages from the MIDI OUT connector will stop.

Data dump reception procedure

① Connect this instrument and the device that will receive the data dump.
If you are using a computer that is able to transmit MIDI exclusive data, connect the computer's MIDI interface (connected to the computer) to the MIDI IN connector of this instrument. (☞p.229)
If you are using a MIDI data filer, connect the MIDI OUT connector of the data filer to the MIDI IN connector of this instrument.

② Set the MIDI channel of the MIDI device to match the global MIDI channel "MIDI Channel" (2.1–1a) of this instrument. If data that was previously transmitted to the MIDI device is now going to be received again by this instrument, set the global MIDI channel of this instrument to the same global MIDI channel setting that was used when transmitting the data.
To set the MIDI channel of the transmitting device, refer to the owner's manual for that device.

③ Turn **check** the "Exclusive" setting (2.1–1b).

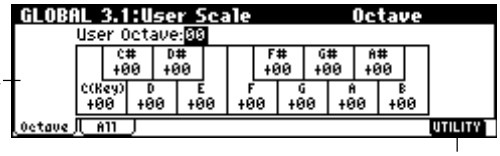
④ Transmit the data from the other device. For the procedure, refer to the owner's manual for the device you are using. While the data is being received, the display will indicate "Now received MIDI data."

GLOBAL 3.1: User Scale

Here you can create sixteen User Octave Scales and one User All Notes Scale. The user scales you create here can be selected in the PROG 2.1–1, COMBI 3.2–1, SEQ 3.2–1(2).

If you wish to keep an edited user scale after the power is turned off, be sure to write (save) your settings. This data is written by the Utility "Write Global Setting." Alternatively, you can press the [REC / WRITE] key to access the Write Global Setting dialog box, and press the [F8] ("OK") key to write the edited data.

3.1–1: Octave



3.1–1a

3.1–1b

3.1–1a: User Octave Scale

User Octave **[00...15]**

Select the user octave scale that you wish to edit.

Tune **[–99...+99]**

Specifies the scale for one octave of notes.
When you adjust the pitch of each note in the octave (C–B) in one-cent steps, your settings will be applied to all octaves. This adjustment is relative to equal temperament.

A setting of **–99** lowers the pitch approximately a semitone below normal pitch.
A setting of **+99** raises the pitch approximately a semitone above normal pitch.

note The note can also be selected by holding down the [ENTER] key and playing a note on the keyboard.

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■ 3.1–1b: UTILITY

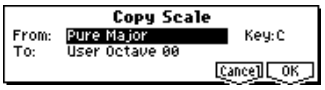
☞"Write Global Setting" (1.1–1d)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Copy Scale

This command copies a preset scale or user scale to the user scale that you wish to edit. For details on the preset scales, refer to "Type" (PROG 2.1–1c).

① Select "Copy Scale" to access the dialog box.

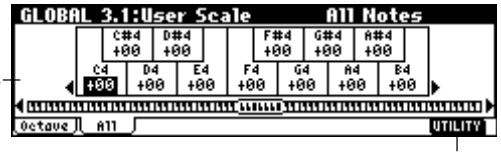


② Select the copy source scale ("From").
If you select **Pure Major** or **Pure Minor**, you must also specify the "Key" selection located at the right.
Stretch can be selected only if "To" is the **User All Notes Scale**.

③ Select the copy destination scale ("To").

④ To execute the Copy Scale command press the [F8] ("OK") key. To cancel without executing press the [F7] ("Cancel") key.

3.1–2: All Notes



3.1–2a

3.1–2b

3.1–2a: User All Notes Scale

Tune [–99...+99]

Here, you can make independent pitch settings for each of the 128 notes.
Adjust the pitch of each of the 128 notes (C–1 – G9) in one-cent steps. This adjustment is relative to equal temperament.

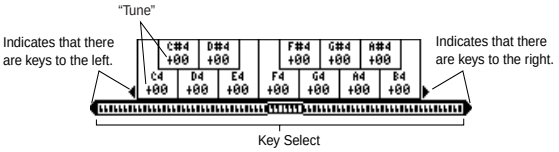
A setting of **–99** lowers the pitch approximately a semitone below normal pitch.
A setting of **+99** raises the pitch approximately a semitone above normal pitch.

In the case of the "User All Notes Scale," you can select **Stretch** in the Utility menu command "Copy Scale" (3.1–1b).

note Use the cursor keys [◄], [►] to select the key that you wish to set. You can also select the key by holding down the [ENTER] key and playing a note on the keyboard.

Key Select [C–1...G9]

This indicates the location of the key displayed in "Tune." You can use the cursor keys [◄], [►] to move in one-octave steps.



■ 3.1–2b: UTILITY

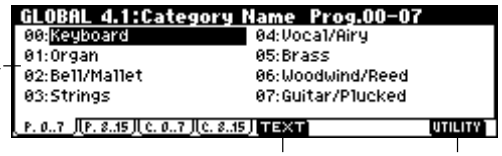
☞"Write Global Setting" (1.1–1d), "Copy Scale" (3.1–1b)

GLOBAL 4.1: Category Name

4.1–1: P.0..7 (Prog.00...07)
4.1–2: P.8..15 (Prog.08...15)
4.1–3: C.0..7 (Comb.00...07)
4.1–4: C.8..15 (Comb.08...15)

Here you can assign names to the program and combination categories.
Select the category whose name you wish to modify, press the [F5] ("TEXT") key to access the text dialog box, and input the name.
A maximum of 16 characters can be input (☞BG p.43).
With the factory settings, these are classified by type of instrument.
You can specify sixteen categories each for programs and combinations.

note The category names you edit here can be specified when you write data in the "Write Program dialog box" (PROG 1.1–1c: UTILITY) or "Write Combination dialog box" (COMBI 1.1–1c: UTILITY), and used in the respective "Select by Category" function to select programs or combinations by category.



4.1–1a

4.1–1b

4.1–1c

4.1–3a

4.1–3b

4.1–3c

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If you want the edited user categories to be backed up when the power is turned off, you must write them into memory. Select the Utility “Write Global Setting” to access the Write Global Setting dialog box, or press the [REC / WRITE] key to display the Update Global settings dialog box and press the [F8] (“OK”) key to write the edited settings.

4.1–1 (...4)a: Category

Indicates the category name that you wish to edit.

■ 4.1–1 (...4)b: TEXT

Edits the category name.
Press the [F5] (“TEXT”) key to access the text dialog box, and enter a category name of up to 16 characters.
For the editing procedure, refer to BG p.43.

■ 4.1–1 (...4)c: UTILITY

☞“Write Global Setting” (1.1–1d)

GLOBAL 5.1: DKit (Drum Kit)

Here you can create a drum kit by assigning a drum instrument (drumsample) to each key.

A drum kit you edit here can be selected in Program mode PROG 2.1: Ed–Basic OSC1 page “Drum Kit” (when “Oscillator Mode” is **Drums**) as an oscillator, and processed through the filter, amp and effects in the same way as a “multisample” (when “Oscillator Mode” is **Single** or **Double**).

When you wish to edit a drum kit, enter Program mode, select a program that uses a drum kit (i.e., whose “Oscillator Mode” is **Drums**), and then move to this page. A program that uses a drum kit will already have filter, amp, and effect settings etc. suitable for drum sounds. (Programs in the separate *Voice Name List* that use a drum kit are indicated by a ⓓ symbol.)
Even if a program with an “Oscillator Mode” of **Single** or **Double** is selected in Program mode, the program will sound using its own filter and amp settings etc. Effects will sound according to the settings of the program you selected. You must set “Octave” (PROG 2.1–2c) to **+0[8']**. With any setting other than **+0[8']**, the key locations and drum sounds will not correspond correctly.

MIDI If “Exclusive” (2.1–1b) is checked, the drum kit can be edited using exclusive data.

When a drum kit is edited, all programs that use that drum kit will be affected.

If you want the edited drum kit settings to be backed up after you turn off the power, you must write them into memory.
Select the Utility “Write Drum Kits” to access the Write Drum Kits dialog box, or press the [REC / WRITE] key to access the Update Drum Kits dialog box, and press the [F8] (“OK”) key to write the edited settings.

☞For details on creating a drum kit, refer to BG p.93.

5.1–1: High (High Sample)

Here you can select a drum kit, assign High and Low drumsamples to each key, and set parameters for the High and Low drumsamples.

5.1–1a: Drum Kit, Key, Assign, Level H, Level L, Vel. SW L→H

Drum Kit **[00(INT)...23(User)]**

Selects the drum kit that you wish to edit.
If you wish to modify the drum kit name, use the “Rename Drum Kit” Utility menu command.

00(INT) ...15(INT)	Preload drum kits, for user drum kits
16(User)...23(User)	for user drum kits

Key **[C–1...G9]**

Indicates the key to which you will assign a drumsample (and its settings).
To select the key, use the [F6] (“Key–”), [F7] (“Key+”) keys.
You can also select a key by holding down the [ENTER] key and playing a note on the keyboard.
All 5.1: DKit parameters except for “Drum Kit” will apply to the key you assign here.
Two drumsamples, High and Low, can be assigned to each key, and you can switch between them by velocity as you play.

Assign **[Off, On]**

On (checked): The drumsamples you assigned for High (5.1–1b) and Low (5.1–2a) will sound. Normally you will check this parameter.
Off (unchecked): The selected drumsamples will be invalid, and the drumsamples of the key to the right will sound. At this time, the pitch will be a semitone lower than the pitch of the key to the right. Uncheck this parameter when you wish to play a drumsample at differing pitches.

Level H (Level High) **[–99...+99]**
Level L (Level Low) **[–99...+99]**

Specifies the volume of the High and Low drumsamples.
Keys that are set to **+99** will sound at a volume double that of the amp level of the program that uses this drum kit. Keys that are set to **0** will sound at the amp level of the program that uses this drum kit.
Keys that are set to **–99** will not sound.

Vel. SW L→H (Velocity SW Lo→Hi) **[001...127]**

Specifies the velocity value at which you will switch from the Low drumsample to the High drumsample. Velocities above this value will sound the High drumsample, and velocities below this value will sound the Low drumsample.
If you do not wish to use velocity switching, set this to **001** and specify only the High drumsample (☞“Velocity SW L→H” PROG 2.1–2(3)a).

note You can also select a key by holding down the [ENTER] key and playing a note on the keyboard.

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5.1–1b: High (High Sample)

Drumsample Bank [ROM, RAM]

Specifies the bank of the High drumsample.

ROM: Select preset Drumsamples. In "Drumsample," you can choose from **0000: BD-Dry 1 – 0412: Amp Noise**. (☞VNL)
RAM: Samples created in Sampling mode or samples loaded in Media mode can be used as drum samples. (Requires installation of the EXB-SMPL option (sold separately) and / or sample data RAM.)
Select the "**Drumsample**" in the range of **000–999**.

note Data in AKAI S1000 / S3000 formats, AIFF format, or WAVE format can also be loaded in Media mode as samples, and used as drum samples.

Drumsample [0000: name...]

Indicates the High drumsample. The sample selected here will be sounded by velocities above the "Vel. SW L→H" value. (☞For details on each drumsample, refer to VNL.)

note When **ROM** is selected as the "Bank," you can use the utility menu command "Select by Category" to select drumsamples by category (☞5.1–1d).

It is not possible to edit the category name of a drumsample, or to re-specify its category.

S.Ofs (Start Offset) [Off, On]

On (checked): The sample waveform will start playback from a location later than the beginning of the drumsample waveform. The location of the Start Offset is pre-determined for each drumsample. This setting is not valid for drumsamples which have no Start Offset.
However when a RAM bank is selected, this will depend on the selected drumsample. If you select a drumsample that includes one of the following types of sample, checking this item will cause playback to start from the Loop Start Address.

- A sample that was recorded (sampled) in Sampling mode (if the EXB-SMPL option is installed)
- A sample whose Loop Start Address was edited in Sampling mode (if the EXB-SMPL option is installed) after the sample was loaded in Media mode
- A sample whose Loop Start Address was specified automatically when it was loaded as an AKAI, AIFF, or WAVE file in Media mode

Off (unchecked): Playback will start from the beginning of the drumsample waveform.

Rev (Reverse) [Off, On]

On (checked): The drumsample waveform will playback in "one-shot" reverse. The location at which the reverse playback will start and end is pre-determined for each drumsample.

If the drumsample is already preset for reverse playback or reverse loop playback, checking this setting will not change its playback direction. In the case of a drumsample from the **RAM** bank, the sample will play (in reverse) from "E (End)" (SMPL 3.1–2b) to "S (Start)."

This parameter will not change the playback direction of a sample for which "Rev (Reverse)" is checked.

Trans (Transpose) [–64...+63]

Adjusts the pitch in semitone steps. **+12** is one octave up, and **–12** is one octave down.

Tune [–99...+99]

Adjusts the pitch in one-cent steps.
–99 is a semitone lower, and **+99** is a semitone higher.

Fc (Cutoff) [–64...+63]

Adjusts the cutoff frequency of the filter. The cutoff frequency for each key is determined by adding this value to the filter "Frequency" (PROG 4.1–1b, 4.2–1b) of the program that uses this drum kit.

Reso (Resonance) [–64...+63]

Adjusts the filter resonance. The filter resonance for each key is determined by adding this value to the filter "Resonance" (PROG 4.1–1b, 4.2–1b) of the program that uses this drum kit. (When the "Type" (PROG 4.1–1a, 4.2–1a) is **Low Pass & High Pass**, there will be no resonance effect.)

At (Attack) [–64...+63]

Adjusts the attack time of the volume (Amplifier). The attack time for each key is determined by adding this value to the amp EG Attack Time of the program that uses this drum kit.

Dc (Decay) [–64...+63]

Adjusts the decay time of the volume (Amplifier). The decay time for each key is determined by adding this value to the amp EG Decay Time of the program that uses this drum kit.

■ 5.1–1c: Key–, Key+

Selects the key to which you will assign a drumsample (and its settings).
☞"Key" (5.1–1a)

■ 5.1–1d: UTILITY

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Write Drum Kits

This command writes all drum kits 00 (INT)–23 (User).

① Select "Write Drum Kits" to access the dialog box.

② To execute the Write command press the [F8] ("OK") key. To cancel without executing press the [F7] ("Cancel") key.

You can also use the [REC / WRITE] key to write the data in the same way as this command.
Press the [REC / WRITE] key to access the "Update Drum Kits" dialog box, and press the [F8] key to write the data.

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Rename Drum Kit

This command renames the selected drum kit. You can input a name of up to sixteen characters. (☞BG p.43)

Copy Drum Kit

This command copies the settings of another drum kit to the currently-edited drum kit. Drum kits 24 (GM)–32 (GM) cannot be edited, but you may copy them to another drum kit and then edit them.

① Select "Copy Drum Kit" to access the dialog box.

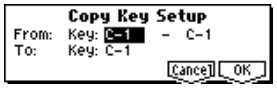
② Select the copy source drum kit ("From").

③ To execute the Copy Drum Kit command press the [F8] ("OK") key. To cancel without executing press the [F7] ("Cancel") key.

Copy Key Setup

This command copies the settings of an individual key to another key. You can also copy settings from two or more contiguous keys at once.

① Select "Copy Key Setup" to access the dialog box.



② Specify the beginning of the range of keys to be copied ("From Key").

③ Select the copy destination key ("To Key").
If you selected multiple keys in "From Key," they will be copied sequentially, starting at "To Key" and extending upward.

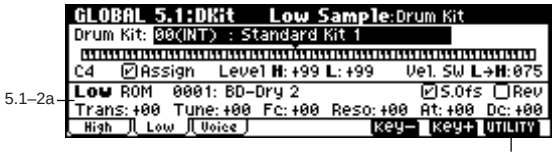
④ To execute the Copy Key Setup operation, press the [F8] ("OK") key. To cancel without executing press the [F7] ("Cancel") key.

Select by Category

If **ROM** is selected for "Bank," you can select drumsamples by category.
All drumsamples are grouped into one of fifteen categories. For the procedure, refer to "Select by Category" (☞p.2)

It is not possible to edit the name of a drumsample category or to change the assigned category of a drumsample.

5.1–2: Low (Low Sample)



5.1–2a

5.1–2b

5.1–2a: Low (Low Sample)

Drumsample Bank **[ROM, RAM]**

Specifies the bank of the Low drumsample (☞"Drumsample Bank" 5.1–1b).

Drumsample **[0000...: name]**

Selects the Low drumsample. This will be sounded by velocities lower than the value set for "Vel. SW L→H" (5.1–1a). (☞For details on each drumsample, refer to VNL.)
The drumsample can be selected using the utility menu command "Select by Category" (☞5.1–1d).

S.Ofs (Start Offset) **[Off, On]**
Rev (Reverse) **[Off, On]**
Trans (Transpose) **[–64...+63]**
Tune **[–99...+99]**
Fc (Cutoff) **[–64...+63]**
Reso (Resonance) **[–64...+63]**
At (Attack) **[–64...+63]**
Dc (Decay) **[–64...+63]**

☞"High Drumsample"(5.1–1b)

■ 5.1–2b: UTILITY

☞"Write Drum Kits," "Rename Drum Kit," "Copy Drum Kit," "Copy Key Setup," "Select by Category" (5.1–1d)

5.1–3: Voice (Voice / Mixer)

For each key of a drum kit, you can set voice assign, pan, and effect routing etc.

5.1–3a

5.1–3b

5.1–3a: Voice Assign Mode / Mixer

Voice Assign Mode:

Single Trig (Single Trigger) **[Off, On]**

On (checked): Even when the same key (note) is played repeatedly, the previous note will be halted before the new note is begun, so that the notes will not overlap. Normally you will leave this **unchecked**.

Excl Group (Exclusive Group) **[Off, 001...127]**

001–127: This allows you to group keys to which a drumsample is assigned. Keys to which the same group number is assigned will be treated as a single group, and will be played monophonically with last-note priority. For example you might assign closed and open hi-hat sounds to the same group so that two or more hi-hat sounds can not sound simultaneously.
Off: Keys will not be grouped. Normally you will set this **Off**.

Enable Note On (Note On Receive)

On (checked): Note-on messages will be received. Normally you will **check** this, but you can **uncheck** it if you do not want specific notes to sound.

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Enable Note Off (Note Off Receive)

On (checked): Note-off messages will be received. Normally you will uncheck this. This parameter is valid when "Hold" (PROG 2.1–1b) is checked (**Hold On**). In the case of a drum program, you will normally select **Hold On**. In this case if "Enable Note Off" is **checked**, note-off messages will be received, and the sound will stop (the release segment of the EG will begin) when the key is released.

Mixer:

Pan **[Rndm, L001...C064...R127]**

Specifies the panning for each key. With a setting of **Rndm (Random)**, the panning of the drumsample will change randomly for each note-on.

BUS (Bus Select) **[L/R, IFX, 1, 2, 1/2, Off]**

Specifies the bus to which each key will be sent.
For example you can send snare-type sounds to **IFX** to apply the insert effect, and send the other sounds to **L/R** without applying the insert effect.

S1 (Send1 (to MFX1)) **[000...127]**
S2 (Send2 (to MFX2)) **[000...127]**

For each key, specify the send levels to master effects 1 and 2. These settings are valid when "BUS Select" (5.1–3a) is set to **L/R** or **Off**.
If "BUS Select" is set to **IFX**, the send level to master effects 1 and 2 will be determined by the Program, Combination, or Sequencer mode Setup pages (PROG / COMBI 7.1–2, SEQ 7.1–3) S1 (Send1(MFX1)," "S2 (Send2(MFX2)" which are located after the sound passes through IFX.

Drum kits will sound using the settings of the program that is selected in Program mode. These settings are valid only if "Use DKit Setting" (PROG 5.1–1b) and "Use DKit Setting" (PROG 7.1–1a) are **checked**. Be aware that the results of editing a drum kit will not be reflected unless these settings have been made in the program.

■ 5.1–3b: UTILITY

☞"Write Drum Kits," "Rename Drum Kit," "Copy Drum Kit," "Copy Key Setup" (5.1–1d)

GLOBAL 6.1: Arp.Pattern

Here you can create user arpeggio patterns.
In this page, the TRITON Le will sound as it did in the mode you were in before entering Global mode.

If you moved here from Program mode: Your editing will apply to the arpeggio pattern that is selected by the program. Even if you moved from a program in which the arpeggiator is turned off, it can be turned on by the [ARP ON / OFF] key.
If you moved here from Combination mode: Your editing will apply to the arpeggio pattern that is selected by the combination. Even if you moved from a combination in which the arpeggiator is turned off, it can be turned on by the [ARP ON / OFF] key.
However, it is not possible to turn on an arpeggiator for which the **A** or **B** parameter is unchecked in "Arpeggiator Run" (COMBI 1.1–4(5)a, COMBI 6.1–1a). Also, the arpeggiator will not run unless it has been assigned to a timbre in "Assign" (COMBI 6.1–1b).

If you moved here from Sequencer mode: Your editing will apply to the arpeggio pattern specified for the selected song. Even if you moved here from settings in which the arpeggiator was turned off, you can use the [ARP ON / OFF] key to turn it on. However, it is not possible to turn on an arpeggiator for which the "Arpeggiator Run" (SEQ 6.1–1(2)a) parameter A or B is not checked. Also, the arpeggiator will not operate if it has not been assigned to a track in "Assign" (SEQ 6.1–1(2)b).

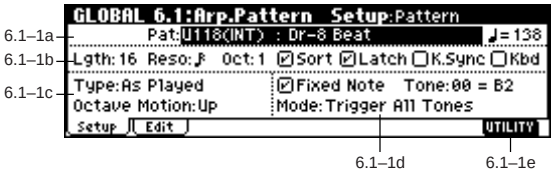
In each of the above cases, you can modify the settings of the arpeggio pattern even if the arpeggiator is not turned on. When editing a pattern, it is a good idea to turn on the arpeggiator and make sure that it is the pattern that you wish to edit.

If you want the edited user arpeggio pattern settings to be backed up even when the power is turned off, you must write them into memory. Select the Utility "Write Arpeggio Pattern" to access the Write Arpeggio Pattern dialog box. Alternatively, press the [REC / WRITE] key to access the "Update Arpeggio Patterns" dialog box. Then press the [F8] ("OK") key to write the edited data.

If you moved here from Sampling mode (if the EXB-SMPL option is installed)**:** The arpeggiator will not turn on, nor will it be possible to edit the arpeggio pattern.

☞For details on creating an arpeggio pattern, refer to BG p.99.

6.1–1: Setup



6.1–1a: Arp, pat (Pattern), ♩ (Tempo)

Arp (Arpeggio Select) **[A, B]**

If you have moved from Combination mode or Sequencer mode and edit an arpeggio pattern, you must select either arpeggiator A or B as the pattern to edit. Your editing will apply only to the selected one.
B will not be displayed if you moved here from Program mode.

Pat (Pattern) **[P000...P004, U000(INT)...U215(User)]**

Selects the pattern that you wish to edit.

P000 ...P004	Preset Arpeggio Patterns
U000(INT)...199(INT)	Preload Arpeggio Patterns
U200(User)...215(User)	for user Arpeggio Patterns

♩ (Tempo) **[040...240, EXT]**

Specify the tempo.
This can also be adjusted by the REALTIME CONTROLS C-mode [TEMPO] knobs. If "MIDI Clock" (2.1–1a) is **External**, the display will indicate **EXT** and the arpeggiator will synchronize to MIDI Clock messages from an external MIDI device.

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6.1–1b: Lgth, Reso, Oct, Sort, Latch, K.Sync, Kbd

Lgth (Length) **[01...48]**

Specify the length of the arpeggio pattern. After the note value specified by "Reso" occurs for the number of times specified here, the pattern will return to the beginning. This parameter is not valid for preset patterns **P000–004**.

Reso (Resolution) **[𝅘𝅥𝅯₃, 𝅘𝅥𝅯, 𝅘𝅥𝅮₃, 𝅘𝅥𝅮, 𝅗𝅥₃, 𝅗𝅥]**

Oct (Octave) **[1, 2, 3, 4]**

Sort **[Off, On]**

Latch **[Off, On]**

K.Sync (Key Sync.) **[Off, On]**

Kbd (Keyboard) **[Off, On]**

☞PROG 6.1: Ed–Arp. "Setup(Arpeg. Setup)"

"Pat," "♩(Tempo)," "Oct," "Reso," "Sort," "Latch," "K.Sync," and "Kbd" are parameters that can be set in Program, Combination, Song, but you can also set them here.

If you move here from Program or Combination mode and set these parameters, you must return to the original mode and write them. These parameters cannot be written by the "Write Arpeggio Patterns" command in this page.

6.1–1c: Arpeggio Pattern Setup

These parameters are not valid for preset patterns P000–P004.

Type (Arpeggio Type) **[As Played...Up&Down]**

Specifies the correspondence between the arpeggio notes specified from the keyboard and the Tone at each step.

As Played: If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), those steps will not sound.
As Played (Fill): If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), the last arpeggio note (the last-played note if "Sort" is **Off**, or the highest note if "Sort" is **On**) will sound for those steps.
Running Up: If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), the arpeggio will return to the first note (the first-pressed note if "Sort" is **Off**, or the lowest note is "Sort" is **On**) and sound it.
Up&Down: If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), the arpeggio will return in reverse direction from the last arpeggio note back toward the first.

Example)

If you set "Lgth" to **04**, "Step" **01** to **Tone0**, "Step" **02** to **Tone1**," "Step" **03** to **Tone2**, "Step" **04** to **Tone3**, and simultaneously play three notes to produce an arpeggio, the following results will be produced depending on the "Type."

As Played: 0 → 1 → 2 → rest → 0 → 1 → 2 → rest → 0 ...
As Played (Fill): 0 → 1 → 2 → 2 → 0 → 1 → 2 → 2 → 0 ...
Running Up: 0 → 1 → 2 → 0 → 0 → 1 → 2 → 0 → 0 ...
Up&Down: 0 → 1 → 2 → 1 → 0 → 1 → 2 → 1 → 0 ...

Octave Motion **[Up, Down, Both, Parallel]**

Specifies the operation when "Oct" is set to 2–4 octaves.

Up: Notes will repeatedly ascend within the specified range of octaves.
Down: Notes will repeatedly descend within the specified number of octaves.
Both: Notes will repeatedly ascend and descend within the specified number of octaves.
Parallel: The notes of the specified octaves will sound simultaneously.

6.1–1d: Fixed Note, Mode, Tone No., Fixed Note No.

Fixed Note **[Off, On]**

Specifies the **Tone** type (the "●" or "❍" displays in 6.1–2) of the arpeggio pattern.
Off (unchecked): This is the normal arpeggiator type. The Tone pitches will be expanded into an arpeggio based on the note number played on the keyboard.
On (checked): You can specify the note number for each **Tone**. The note numbers from the keyboard will be ignored for the purposes of the **Tone** pitch, and the arpeggio will be sounded using the note numbers specified for each Tone. The note numbers from the keyboard will only control the timing at which the arpeggiator is triggered. This setting is suitable for arpeggio patterns used for drum patterns etc. The Tone indication in 6.1-2: Arp.Pattern, Edit page will be "●" if this setting is Off (unchecked), or "❍" if this is On (checked).

Mode (Fixed Note Mode) **[Trigger As Played, Trigger All Tones]**

Specifies how tones will be triggered when "Fixed Note" is **checked**.
Trigger As Played: The **Tones** will be triggered according to the number of keys pressed.
Trigger All Tones: Pressing a single key will trigger all **Tones**.

Example)

Here's how the drums pattern will sound when "Fixed Note" is **checked**. **Tone 1** is assigned a note number that plays a kick sound, **Tone 2** a snare, and **Tone 3** a hi-hat. With a setting of **Trigger As Played**, pressing one key will sound only **Tone 1** (kick). Pressing two keys will sound **Tone 1** (kick) and **Tone 2** (snare). Pressing three keys will sound all three Tones 1–3 (kick, snare, hi-hat). If the "Vel (Velocity)" of each Tone is set to **Key**, each **Tone** will be sounded at the velocity with which each key was played.

With a setting of **Trigger All Tones**, playing one key is sufficient to sound all three; **Tone 1** (kick), **Tone 2** (snare), and **Tone 3** (hi-hat). If the "Vel (Velocity)" of each **Tone** is set to **Key**, the Tones will be sounded at the corresponding velocity each time a key is pressed.

Tone No. **[00...11]**

This is valid only if "Fix Note" (6.1–1d) is **checked**. It selects the **Tone**.

Fixed Note No. **[C–1...G9]**

Specifies the note number for the selected **Tone**. You can also input this value by holding down the [ENTER] key and pressing a note on the keyboard.

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■ 6.1–1e: UTILITY

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Write Arpeggio Patterns

This command writes user arpeggio patterns U000 (INT)–U215 (User).

① Select "Write Arpeggio Patterns" to access the dialog box.

② To execute the Write command press the [F8] ("OK") key. To cancel without executing press the [F7] ("Cancel") key.
You can also write the same data as "Write Arpeggio Patterns" by pressing the [REC / WRITE] key.
Press the [REC / WRITE] key to access the "Update Arpeggio Patterns" dialog box, and press the [F8] to write the data.

"Pat,""♩ (Tempo)," "Oct," "Reso," "Sort," "Latch," "K.Sync," and "Kbd" are parameters that are set in Program, Combination, and Sequencer modes. The Write operation executed here does not save these parameters.
If you move here from Program or Combination mode and set these parameters, you must return to the original mode and write them.

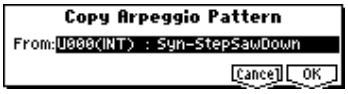
Rename Arpeggio Pattern

This command renames the selected user arpeggio pattern. Up to sixteen characters can be input. Preset patterns P000–P004 cannot be selected (☞BG p.43).

Copy Arpeggio Pattern

This command copies the settings of another user arpeggio pattern to the currently selected arpeggio pattern. It is not possible to copy from a preset arpeggio pattern P000–P004 .

① Select "Copy Arpeggio Pattern" to access the dialog box.



② Select the copy source arpeggio pattern "From."

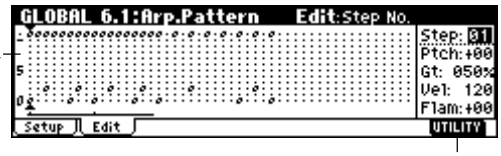
③ To execute the Copy Arpeggio Pattern command press the [F8] ("OK") key. To cancel without executing press the [F7] ("Cancel") key.

6.1–2: Edit

Here you can input **Tones 0–11** for each step 01 to 48. "**Step**" can be a maximum of 48 steps, and Tone corresponds to up to twelve notes for the (up to) twelve keys pressed simultaneously. If "Sort" (6.1–1b) is **checked**, the notes that were pressed will correspond in ascending order of pitch to **Tones 0**, **1**, etc. If "Sort" (6.1–1b) is **unchecked**, the notes that were pressed will correspond to **Tones 0**, **1**, etc. in the order in which they were pressed.

These parameters are not valid for preset patterns P000–P004 .

6.1–2a



6.1–2b

6–2a: Step, Ptch, Gt, Vel, Flam

Step (Step No.) [01...48]

Select the step that you wish to edit, and set / reset each **Tone**.
When the "Step" is selected, use the numeric keys to input the **Tones**. Numeric keys [0]–[9] correspond to **Tones 0–9**, [–] corresponds to **Tone 10**, and [. / HOLD] to **Tone 11**. Each time you press a key, the Tone will be set or reset.
If "Fix Note" (6.1–1d) is **checked**, this will be displayed as "●." If **unchecked**, this will be displayed as "❍."
To delete all **Tones** of a step, use the Utility "Delete Step." To insert a blank step, use the Utility "Insert Step."

Ptch (Pitch Offset) [–48...+48]

For each step, the pitch corresponding to the **Tone** can be raised or lowered in semitone steps. This lets you make settings for the same tone in each step to create a melody, or to make settings for two or more tones in each step to play parallel chords.

Gt (Gate) [Off, 001...100%, LGT]

Off: That step will not sound even if **Tones** have been specified.
LGT: Notes will continue sounding until the same **Tone** is sounded next, or until the pattern returns to the beginning. At this time, the display will change to "■" or "□."
This setting is valid when the Program, Combination, or Song parameter "Gate" (PROG 6.1–1a, COMBI 6.1–2(3)a, SEQ 6.1–3(4)a) is set to **Step**. When making this setting, make sure that "Gate" is set to **Step** in the mode from which you arrived here.

Vel (Velocity) [001...127, Key]

Key: The Tone of the step will sound with the velocity at which the key was played.
001–127: The specified velocity value will always be used.
This setting is valid when the Program, Combination, or Song parameter "Velocity" (PROG 6.1–1a, COMBI 6.1–2(3)a, SEQ 6.1–3(4)a) is set to **Step**.
When making this setting, make sure that "Velocity" is set to **Step** in the mode from which you arrived here.

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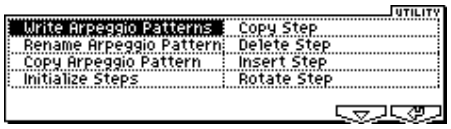
Flam [–99...+99]

Specifies how the note timing will be skewed when two or more **Tones** are specified in the same step.

00: All **Tones** will sound simultaneously.
+01–+99: The timing of the notes will be skewed in the order of the **Tone** number. (When "Sort" is **ON**, from low note to high note. When "Sort" is **OFF**, in the order in which keys were pressed.)
–01– –99: The timing of the notes will be skewed in the opposite direction as "+."
To simulate chords strummed on a guitar, it is effective to set "**+**" values for odd-numbered steps and "**–**" values for even-numbered steps.
This setting is not valid for preset patterns P000–P004.

■ 6.1–2b: UTILITY



☞"Write Arpeggio Patterns," "Rename Arpeggio Pattern," "Copy Arpeggio Pattern" (6.1–1e)

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

Initialize Steps

This command initializes the step parameters ("Tone," "Ptch," "Gt," "Vel," "Flam") of the arpeggio pattern.

① Select "Initialize Steps" to access the dialog box.

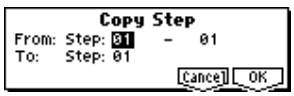
② Select the type "Type" of initialize.
Empty will initialize all tones to a blank state. **Full** will initialize all tones to a full state.

③ To execute the Initialize Steps operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Copy Step

This command copies the settings of a specific step. The settings of two or more adjacent steps can also be copied together.

① Select "Copy Step" to access the dialog box.



② Select the range of steps that you wish to copy ("From Step").

③ Select the copy destination step "To Step".
If you selected more than one step in "From Step," the steps will be copied starting at "To Step" and continuing through the steps to the right.

④ To execute the Copy Step command, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Delete Step

This command deletes the step parameters ("Tone," "Ptch," "Gt," "Vel," "Flam") of the currently selected step number. Subsequent steps will move one column toward the left.

① Select "Delete Step" to access the dialog box.

② To execute the Delete Step operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Insert Step

This command inserts an empty step into the currently selected step number. Subsequent steps will be moved one step to the right.

① Select "Insert Step" to access the dialog box.

② To execute the Insert Step operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Rotate Step

This command rotates the step settings.

① Select "Rotate Step" to access the dialog box.

② Select the type "Direction" of rotation.
For example, suppose there is a pattern of "Length" **4**.
If you select **Forward**, the settings of Step 1 will be rewritten to 2, Step 2 →3, Step 3 →4, Step 4 → 1.
If you select **Backward**, the settings of Step 1 will be rewritten to 4, Step 2 → 1, Step 3 → 2, Step 4 → 3.

③ To execute the Rotate Step operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

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6. Media mode

In this mode, various types of internal memory data can be saved / loaded to / from SmartMedia or an external SCSI device (if the EXB-SMPL option is installed).

For the types of SmartMedia that can be used, refer to BG p.96.

About the EXB-SMPL option

If the EXB-SMPL option (sold separately) and the included 72-pin SIMM memory module (16 Mbyte sample data RAM) are installed, you will be able to save / load multisample and sample data created in Sampling mode (☞p.144, 149), or load / export AIFF files or WAVE files that were created on your computer (☞p.146, 150).
Sample data RAM can be expanded by installing up to two 72-pin SIMM modules of either 32 MB or 16 MB (total maximum 64 MB).

note Even if the EXB-SMPL is not installed, you can install RAM in the 72-pin SIMM slots to allow loading of multisample or sample data created on the TRITON series, or AIFF files and WAVE files. However in this case, it will not be possible to edit the multisample or sample data.

In addition, an external SCSI device (hard disk, removable media, etc.) can be connected to the SCSI connector of the EXB-SMPL, allowing data to be saved on a hard disk etc. in the same way as on SmartMedia, or allowing you to load data from CD-ROM.
For details on formatting, refer to p.152. For details on connections and ID settings for external SCSI devices when the EXB-SMPL option (sold separately) is installed, refer to the operation manual included with the EXB-SMPL.

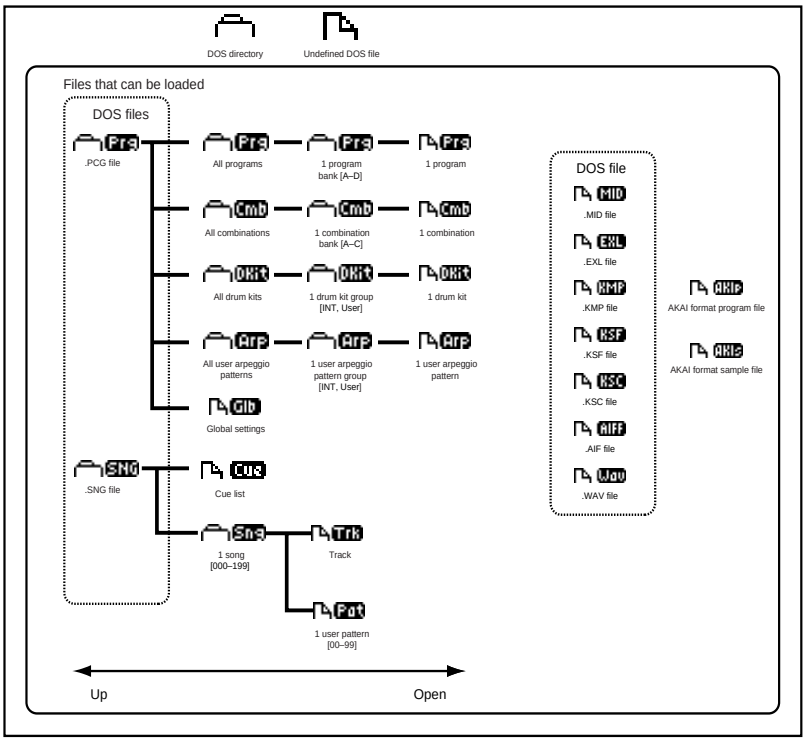
Files, directories, and icons

The TRITON Le manages data on SmartMedia and other media in a hierarchical manner, using files and directories. The contents of a file (whether it is a file or a directory) are indicated not only by the name but also graphically by an icon. Files and directories have differently shaped icons.

On the TRITON Le, files and directories that can be recognized by MS-DOS (i.e., read by an MS-DOS computer) are referred to as DOS files and DOS directories.
Various types of DOS files are distinguished by the extension that is added to the filename.
In the case of a DOS file with an extension other than listed below, selecting “Load selected” to access the dialog box will cause the file to be considered to be a Standard MIDI File (SMF). However, non-SMF files cannot be loaded.
When you save a file on the TRITON Le, one of these filename extensions will automatically be added as appropriate for the type of data.

If you change the filename extension of the following files, they will be handled as undefined files when you attempt to load them again; they will not be loaded correctly.

Extension	Type
.PCG	Program, combination, drum kit, user arpeggio pattern, global settings
.SNG	Song, cue list
.MID	Standard MIDI File (SMF)
.EXL	MIDI exclusive data
.KMP	Korg Multisample Parameter file (Korg format)
.KSF	Korg Sample File (Korg format)
.KSC	Korg Script File (Korg format)
.AIF	AIFF file
.WAV	WAVE file



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If sample data RAM is not installed, .KMP, .KSF, .KSC, .AIF, .WAV, and AKAI files can be recognized but not loaded. In this case, a message of "Memory overflow" will be displayed.

Files handled by the TRITON Le have the following structure. Since .PCG and .SNG files can be opened to divide their contents, they are displayed as directory icons. (☞p.139)

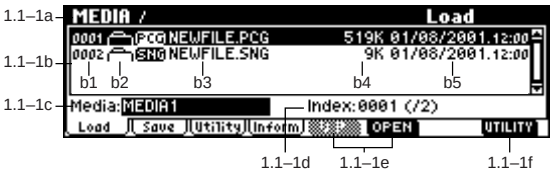
MEDIA PAGE MENU

In Media mode you can press the [F1]–[F4] keys located below the tab to select the desired page.

Load	Load the contents of the selected file or directory into internal memory. (☞p.140)
Save	Save various from internal memory to SmartMedia or other media. (☞p.148)
Utility	Rename, copy, or delete a selected SmartMedia or file, create a new directory, or specify the date and time. (☞p.151)
Media Information	View information on the selected media. (☞p.153)

1.1–1: Load

Here you can load a selected file or directory into internal memory.
Use the [F5] ("UP") key and [F6] ("OPEN") key to select the desired file or directory. Then use the Utility "Load selected" (1.1–1f) to select and load the data.



1.1–1a: Current directory

The directory currently selected for processing is referred to as the "current directory."
The LCD screen will show the full path name of the directory. A slash "/" character is used as the delimiter between directory levels. To change the current directory, use the [F5] ("UP") key and [F6] ("OPEN") key.

1.1–1b: Directory window

Directory window

File information for the current directory is shown here. You can select a file or directory in this window.

b1: File index
This displays the file index.

b2: File / icon
The icon indicates the type of file.
For details on icons, ☞p.139.

b3: File name
This is the name of the file (DOS file).
If the Utility "Translation" (1.1–1f) is **checked**, the DOS filename of a .KMP (Korg multisample parameter) file or .KSF (Korg sample file) that is loaded will be replaced in the display by the multisample name or sample name that you specified in Sampling mode.

b4: Size
This is the size of the file (in bytes).

b5: Save date and time
This shows the date and time when the file was saved. From the left, this is shown as day, month, year, hours and minutes.
However since the TRITON Le does not contain an internal calendar or clock, you must use "Set Date / Time" (1.1–3a) to set the date and time before saving the file.

1.1–1c: Media select

Selects the device (SmartMedia slot or hard disk etc.) that will be used for loading and saving.

When you press the [MEDIA] key or a function key to make the TRITON Le recognize the media, the volume label of that media will be displayed. If the media has no volume label, the display will indicate "no label." If the media has not been formatted, the display will indicate "Unformatted."

If the EXB-SMPL option is installed and the TRITON Le is recognizing multiple media volumes connected to the SCSI connector, use the [INC] / [DEC] keys to select the media.
If the EXB-SMPL is not installed or if no external SCSI devices are connected to the SCSI connector of the EXB-SMPL, only SmartMedia can be selected.

1.1–1d: File select

The file / directory selected in the directory window will be shown in "Index:" The total number of files in the current directory is shown in "(/)."
Use the [▲], [▼] keys to choose File Select, and use the numeric keys to directly select the file or directory to be edited.

■ 1.1–1e: UP, OPEN

Select the current directory.
Use the [F5] ("UP") key and [F6] ("OPEN") key to select the current directory.

UP : Move to the higher directory.
OPEN : Move to a lower directory.

■ 1.1–1f: UTILITY

For details on how to select the desired utility function, refer to "PROG 1.1–1c: UTILITY."

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Hide unknown file

Select “Hide unknown file” in the utility menu and press the [F8] key. A check mark will appear at the left of “Hide unknown file.” With this setting, undefined files will not be displayed in the directory window. However, this is effective only if the current directory is a DOS directory.

Translation

Select “Translation” in the utility menu and press the [F8] key. A check mark will appear at the left of “Translation.” With this setting, .KMP (Korg multisample parameter) files and .KSF (Korg sample file) DOS file names will be displayed as the multisample name or sample name used in Sampling mode (if the EXB-SMPL option is installed).

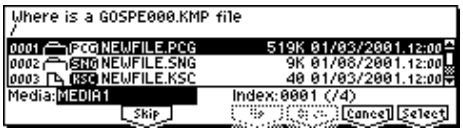
Load selected

This command loads into internal memory the file or directory that was selected in the “directory window” (1.1–1b). When you choose “Load selected” from the Utility menu, a dialog box will appear. The dialog box will differ depending on the type of file to be loaded.

If the file to load cannot be found, or when loading a file that was saved in parts

When loading multisample or sample data files (if sample data RAM is installed), and the TRITON Le cannot find a necessary file in the current directory or in a lower directory, a dialog box like the one shown below (“Where is a ...”) will be displayed. This will appear in the following situations.

- When loading a .KSC file (when sample data RAM is installed), if the .KMP file used by it cannot be found
- When loading a .KMP file (when sample data RAM is installed), if the .KSF file cannot be found
- When loading an AKAI S1000 / S3000 format Program file (when sample data RAM is installed), if the Sample file cannot be found
- When loading a .KSF file (when sample data RAM is installed) that is larger than the capacity of the media and was saved across multiple volumes of media, when the first volume has finished loading and the second or subsequent volume is needed



If this dialog box appears, take the following action.

① Select the directory that contains the file requested by “Where is a ...” If the requested file is on another volume of media, exchange the media, then press the [MEDIA] key or a function key to make the TRITON Le recognize the media, and then select the directory.

It is not possible to open .PCG or .SNG files in the “Where is a ...” dialog box. The [F6] (“OPEN”) key cannot be used for .PCG or .SNG files.

② Press the [F8] (“Select”) key to resume loading. If you press the [F7] (“Cancel”) key, loading will be halted. If you press the [F3] (“Skip”) key, the specified files will be skipped, and the next file will be loaded.
Except for special cases in which the media containing the specified file has been damaged or is unavailable, press the [F8] (“Select”) key to continue loading.

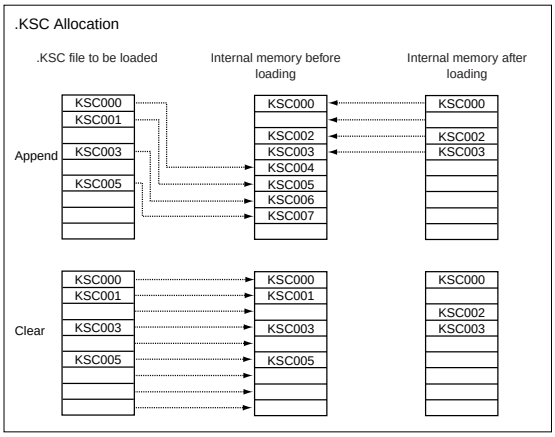
1) Load .PCG: **selected icon** PCG

All data in the .PCG file will be loaded.

① If the current directory contains a .SNG file or .KSC file of the same filename, you can select “Load ********.SNG too” and “Load ********.KSC too”.

- If you **check** “Load ******.SNG too,” the file with an identical name to the .PCG file and an extension of .SNG will also be loaded.
- If you **check** “Load ********.KSC too,” the file with an identical name to the .PCG file and an extension of .KSC will also be loaded.

② If you checked “Load ********.KSC too”, set “.KSC Allocation” to specify how the multisamples and samples within the .KSC file will be loaded.
Append: The data will be loaded into the numbers after the last multisample or sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded). In this case, only the valid multisamples and samples will be loaded, and will be packed without leaving vacant numbers (see diagram below).
At this time, programs in the .PCG file that use multisamples listed in the .KSC file will automatically have their oscillator multisample settings remapped so that each program uses the correct multisamples. Drum kits in the .PCG file that uses samples listed in the .KSC file will also have their drum kit sample settings remapped so that the drum kit plays the correct samples.
Clear: All multisamples and samples currently existing in sample data RAM will be cleared, and the multisamples and samples will be loaded in the same configuration as when they were saved (see diagram below).
If you want to load multisamples and samples from media without erasing the multisamples and samples that currently exist in sample data RAM, choose **Append**.
If you want to reproduce the state in which the data had been saved, for example immediately after power-on, choose **Clear**.



③ To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

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2) Load Programs: selected icon Prg

All program data from a .PCG file will be loaded.

① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

3) Load Program Bank [A...D]: selected icon Prg

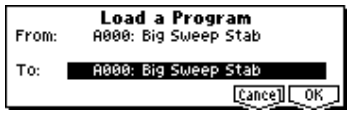
All program data of the selected bank will be loaded into the bank you specify.

① In “To,” select the loading destination bank.

② To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

4) Load a Program: selected icon Prg

Data for the selected program will be loaded into the program number you specify.



① If you wish to load a program other than the one already selected, use “From” to select the program that you wish to load.

② In “To,” select the bank and program into which the data will be loaded.

③ To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

5) Load Combinations: selected icon Cmb

All combinations in the .PCG file will be loaded.

① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

6) Load Combination Bank [A...C]: selected icon Cmb

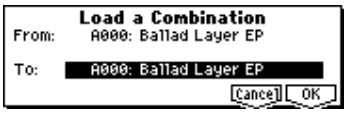
All combinations in the selected bank will be loaded into the bank you specify.

① In “To,” specify the loading destination bank.

② To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

7) Load a Combination: selected icon Cmb

The combination you select will be loaded into the loading destination combination number you specify.



① If desired, use “From” to re-select the combination to be loaded.

② In “To,” select the bank and combination into which the data will be loaded.

③ To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

8) Load Drum Kits: selected icon Drk

All drum kits in the .PCG file will be loaded.

① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

9) Load Drum Kit [00…15(INT),16…23(User): selected icon Drk

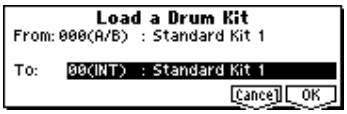
All drum kit data of the selected drum kit block will be loaded into the drum kit block you specify as the loading destination.

① In “To,” select the drum kit block into which the data will be loaded.

② To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

10) Load a Drum Kit: selected icon Drk

The selected drum kit will be loaded into the drum kit number you specify as the loading destination.



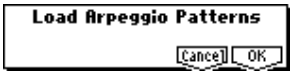
① If desired, use “From” to re-select the drum kit to be loaded.

② In “To,” select the loading destination drum kit.

③ To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

11) Load Arpeggio Patterns: selected icon Arp

All user arpeggio pattern data in the .PCG file will be loaded.



① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

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12) Load Arpeggio Pattern [000…199(INT), 200…215(User)]: selected icon Arp

All user arpeggio pattern data in the selected user arpeggio pattern block will be loaded into the user arpeggio pattern block you specify as the loading destination.

① In "To," select the loading destination user arpeggio pattern block.

If you select user arpeggio pattern block 000–199 (INT) as the destination for loading either **200–215(User)**, user arpeggio patterns 000–015 will be loaded. If you select 200–215(User) as the loading destination for **000–199 (INT)**, the data will be loaded into user arpeggio patterns 000–015(INT).

② To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

13) Load an Arpeggio Pattern: selected icon Arp

The selected user arpeggio pattern data will be loaded into the user arpeggio pattern number that you specify as the loading destination.

① If desired, use "From" to re-select the user arpeggio pattern to be loaded.

② In "To," specify the loading destination user arpeggio pattern.

③ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

14) Load Global Setting: selected icon Glb

Global setting data in the .PCG file will be loaded.

This includes Global mode parameters other than drum kits and user arpeggio patterns.
Memory protect, and LCD screen contrast will not be loaded.

① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

15) Load .SNG: selected icon SNG

All data in the .SNG file will be loaded.

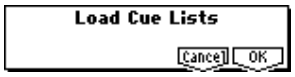
① If a .PCG file or .KSC file of the same name exists in the current directory, you can select the "Load ********.PCG too" and "Load ********.KSC too" check boxes.
☞"1) Load .PCG: ①"

② If you checked "Load ********.KSC too," set ".KSC Allocation" to specify how the multisamples and samples in the .KSC file will be loaded.
☞"1) Load .PCG: ②"

③ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

16) Load Cue Lists: selected icon Cue

The cue list data in the .SNG file will be loaded.



① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

17) Load a Song: selected icon Sng

Data for the selected song will be loaded into the song number you specified as the load destination.

① If you wish to load a song other than the one already selected, use "From" to re-select the song that you wish to load.

② In "To," select the loading destination song.

③ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

18) Load tracks: selected icon Trk

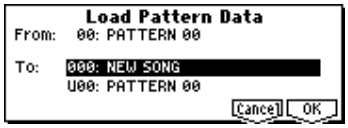
The selected Track file will be loaded into the song you specify as the loading destination. However, it is not possible to specify an uncreated song as the loading destination.

① In "To," specify the loading destination song.

② To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

19) Load Pattern Data: selected icon Pat

The selected user pattern will be loaded into a user pattern of the selected loading destination song. However, it is not possible to specify an uncreated song as the loading destination.



① If you wish to load a user pattern other than the one already selected, use "From" to re-select the user pattern that you wish to load.

② In "To" and "Pattern," select the loading destination song and user pattern.

③ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

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20) Load Standard MIDI File: selected icon MID

The selected Standard MIDI File will be loaded into the song number you select as the loading destination.

① Use “To” to select the loading destination song.

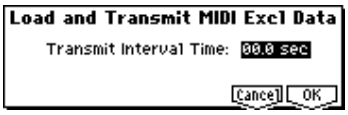
② To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

The program bank and program numbers loaded into the song will follow the “Bank Map (GLOBAL 1.1–2a) setting. If “Bank Map” is **KORG**, bank A will be selected for bank select 00.00 (MSB.LSB). If “Bank Map” is **GM**, bank G will be selected.

If you select an undefined file and choose “Load selected,” the file will be assumed to be a Standard MIDI File, and the “Load Standard MIDI File” dialog box will appear. When you execute loading, the file will be loaded into the song that was specified as the loading destination. However if the file format is inappropriate, the operation will be invalid and an error message will be displayed.

21) Load and Transmit MIDI Exclusive Data:
selected icon EXL

Load all data from the .EXL file and transmit it from MIDI OUT.



① If the .EXL file contains two or more exclusive data items, use “Transmit Interval Time” to specify the time interval that will be inserted between each item of exclusive data. If you are transmitting the data to another TRITON Le, the required time interval will depend on the type of data. After transmitting all .PCG data, you must allow an interval of approximately 20 seconds. For details refer to the Global mode section on Dump (☞GLOBAL 2.1–1c). For other MIDI devices, refer to their owner’s manual.

② To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

The data size that can be transmitted will depend on the amount of unused song memory. The maximum is 199,604 bytes.

Loading sample data

The 22) Load .KSC, 23) Load .KMP, and 24) Load .KSF commands explained here will load Korg-format PCM data files into the sample data RAM of the TRITON Le (if the EXB-SMPL option and / or sample data RAM is installed).

About the sample data RAM

One 16 Mbyte sample data RAM module (SIMM module) is included with the EXB-SMPL option (sold separately).
When you install the EXB-SMPL, you must also install sample data RAM into a sample data RAM slot (72-pin SIMM slot) inside the TRITON Le.
The TRITON Le has two slots for sample data RAM (72-pin SIMM slots), allowing you to install additional sample data RAM. By installing 16 Mbyte or 32 Mbyte SIMM modules you can expand the sample data memory to a maximum of 64 Mbytes.

It is not possible to load an individual sample that is larger than 16 Mbytes.

Limitations on the maximum number that can be loaded

- Multisamples: up to 1,000
- Samples: up to 4,000
- Samples used by multisamples: up to 4,000

About Korg format PCM data files

KSC files KSC

Files with an filename extension of KSC (Korg SCript) contain the names of .KMP and .KSF files.
When a .KSC file is loaded, the .KMP and .KSF files whose names it contains will also be loaded. This is a convenient way to load multiple multisamples and samples at once.
When this file is saved, a directory will be created with the same name as the .KSC file, and the .KMP and .KSF files listed in the .KSC file will be saved in that directory.

KMP files KMP

Files with a filename extension of KMP (Korg Multisample Parameter) contain the parameters which make up a single multisample. These parameters also include the filename of the .KSF files that are used by that multisample, so when a .KMP file is loaded, the necessary .KSF files will also be loaded at the same time.
When this file is saved, a directory will be created with the same name as the .KMP file, and the .KSF files used by the multisample will be saved in that directory.

KSF files KSF

Files with a filename extension of KSF (Korg Sample File) contain the parameters and waveform data which make up a single sample.
A .KSF file can be used as one of the samples used by a multisample. A .KSF file can also be selected and used as a drum sample for a drum kit.

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Loading multiple files

You can use wild cards to simultaneously load two or more .KMP, .KSF, .AIF, .WAV., AKAI Program, or AKAI Sample files from a directory.

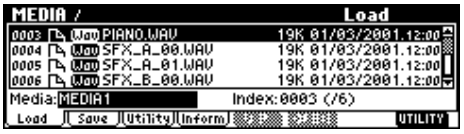
note You can use Utility 23) Load .KMP, 24) Load .KSF, 25) Load .AIF, 26) Load .WAV, 27) Load AKAI Sample File, 28) Load AKAI Program File.

In the dialog box, you can press the [F5] ("Name") key to display the text input dialog box and use the wild cards "*" and "?" in the selected filename so that multiple sample files with the same extension (i.e., of the same format) will be loaded simultaneously.

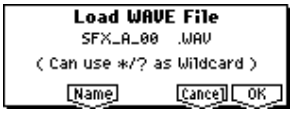
Example)

When a folder contains the following files, you have selected "SFX_A_00.WAV," and want to use wild cards to load multiple files simultaneously

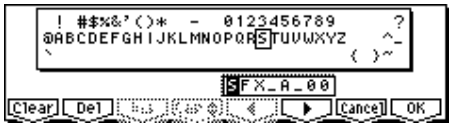
PIANO.WAV, SFX_A_00.WAV, SFX_A_01.WAV, SFX_B_00.WAV, SFX_B_01.WAV, SFX_C_00.WAV



Select "SFX_A_00.WAV," and choose the Utility "Load selected" to display the dialog box.



Press the [F5] ("Name") key to access the text input dialog box, and specify a wild card. (For the renaming procedure, refer to BG p.43.)



The wild card "*" matches all subsequent characters.
The wild card "?" matches only one character.

1) If you specify **SFX_A*** and execute loading, the following files will be loaded.
SFX_A_00.WAV, SFX_A_01.WAV

2) If you specify **SFX_?_00** and execute loading, the following files will be loaded.
SFX_A_00.WAV, SFX_B_00.WAV, SFX_C_00.WAV

3) If you specify **SFX_*_00** and execute loading, the result will be the same as if you had specified "SFX_*" and the following files will be loaded.
SFX_A_00.WAV, SFX_A_01.WAV, SFX_B_00.WAV
SFX_B_01.WAV, SFX_C_00.WAV

4) If you specify ***** and execute loading, all .WAV files will be loaded, as follows.
PIANO.WAV, SFX_A_00.WAV, SFX_A_01.WAV, SFX_B_00.WAV, SFX_B_01.WAV, SFX_C_00.WAV

22) Load .KSC: selected icon KSC

The .KMP files and .KSF files listed in the .KSC file will be loaded as multisamples and samples respectively.

The .KMP files and .KSF files listed in the .KSC file are saved in a directory of the same name that is created automatically at the same time as the .KSC file.

① ".KSC Allocation" allows you to specify how the multisamples and samples in the .KSC file will be loaded.
Append: The data will be loaded into the numbers after the last multisample or sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded). In this case, only the valid multisamples and samples will be loaded. (☞p.141 "Load .KSC too", ".KSC Allocation" diagram)
If "Load ********.PCG too" is **checked** when you load the data, programs within the .PCG file that use multisamples from the .KSC file will automatically have the multisample settings for their oscillators rewritten so that each program uses the correct multisample. Drum kits in the .PCG file that use samples from the .KSC file will automatically have the sample settings for the drum kit rewritten so that the drum kit uses the correct samples.
Clear: All multisamples and samples currently existing in sample data RAM will be cleared, and the multisamples and samples will be loaded in the same configuration as when they were saved (☞p.141 "Load .KSC too", ".KSC Allocation" diagram).
Choose "**Append**" if sample data RAM already contains multisamples and samples that you do not want to erase, and you would like to load additional multisamples and samples from media.
Choose "**Clear**" if you want to reproduce the state in which the data had been saved, for example immediately after power-on.

② If the current directory contains a .PCG file or .SNG file of the same filename, you will be able to select the "Load ********.PCG too" and/or "Load ********.SNG too" checkboxes.
- If you **check** "Load ********.PCG too," the .PCG file of the same name as the .KSC file will also be loaded.
- If you **check** "Load ********.SNG too," the .SNG file of the same name as the .KSC file will also be loaded.

☞"Load.PCG: ①"

③ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.
If the .KSF files used by the .KMP file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure "If the file to load cannot be found,…" (☞p.141) to load the required .KSF files.

Since overflow checking of sample data RAM is performed when loading each individual .KSF file, it is possible that an overflow may occur in the middle of the loading process.

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23) Load .KMP: **selected icon** KMP

The selected .KMP file will be loaded as a multisample. The .KSF files used by the .KMP will also be loaded as samples.

The .KSF files used by the .KMP file will be saved in an identically-named directory that is created automatically when the .KMP file is created.

① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.
The data will be loaded into the numbers that follow the last multisample or sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded). In this case, only the valid multisamples and samples will be loaded (Append load).
If a .KSF file used by the .KMP file is not found in the current directory or lower, a dialog box will appear, asking you to specify the directory. Use the procedure described in "When a file to be loaded cannot be found..." (☞p.141) to load the required .KSF file.

Since overflow checking of sample data RAM is performed when loading each individual .KSF file, it is possible that an overflow may occur in the middle of the loading process.

note You can load multiple files within the directory. (☞p.145)

24) Load .KSF: **selected icon** KSF

The selected .KSF file will be loaded as a sample.

① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.
The data will be loaded into the numbers that follow the last sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded) (Append load).

note You can load multiple files within the directory. (☞p.145)

Loading AIFF files and WAVE files

If the EXB-SMPL option (sold separately) and sample data RAM are installed in the TRITON Le, you can load AIFF format or WAVE format files containing audio data that was saved on your computer. The loaded data can be used as samples or drum samples.

25) Load .AIF: **selected icon** AIFF

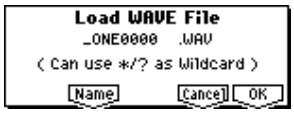
The selected AIFF file will be loaded as a sample.

① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.
The data will be loaded into the numbers that follow the last sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded) (Append load).

note You can load multiple files within the directory. (☞p.145)

26) Load .WAV: **selected icon** WAV

The selected WAVE file will be loaded as a sample.



① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.
The data will be loaded into the numbers that follow the last sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded) (Append load).

Files with an extension of other than .AIF / .WAV cannot be recognized as AIFF / WAVE files. In this case, use the Utility "Rename" (1.1–3a) to change the last four characters of the filename to ".AIF" / ".WAV"

If the data that is loaded as a sample contains a loop point, you can set "S.Ofs(Start Offset)" (PROG 2.1–2b, GLOBAL 5.1–1b) on the TRITON Le so that the sound will begin from the loop point.

If data whose sample size is 8 bits or less is loaded, it will be converted into 16 bit data inside the TRITON Le. This will mean that the amount of internal memory consumed will be approximately twice as large as the file size. The increase in size resulting from this conversion may mean that it is impossible to save that data on a media.

Loading AKAI S1000/S3000 format Sample files and Program files

If sample data RAM is installed in the TRITON Le, AKAI S1000 / S3000 format Sample files and Program files can be loaded (☞p.147 "About AKAI Program files" for more information about compatibility). The loaded Sample or Program file data can be used as a sample or multisample respectively. When the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file or .KMP file respectively.
AKAI S1000 / S3000 format stereo Sample files and Program files whose names end in "-L" and "-R" can be loaded into the TRITON Le as stereo samples and multisamples.
When the above files are loaded, "-L" and "-R" will automatically be moved to the end of the sample name or multisample name (15th and 16th character) so that they can automatically be recognized as stereo samples or multisamples.

27) Load AKAI Sample File: **selected icon** AIFF

The selected Sample will be loaded as a sample.

① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.
The data will be loaded into the numbers that follow the last sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded) (Append load). If the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file. (possi-

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ble to export as a .AIF, .WAV format ☞p.150 “Export Smpl AIF / WAV”)

If the data that is loaded as a sample contains a loop point, you can set “S.Ofs(Start Offset)” (PROG 2.1–2b, GLOBAL 5.1–1b) on the TRITON Le so that the sound will begin from the loop point.

note If the end (11th and 12th characters) of the sample name is “-L” and “-R,” the “-L” and “-R” will automatically be moved to the end of the TRITON Le’s sample name (15th and 16th characters).
When you load two files whose sample names are identical except for ending in “-L” and “-R,” and assign them to a stereo multisample in Sampling mode, they will be recognized as a stereo sample.

Sample files

Parameter	AKAI S1000/S3000 format	TRITON Le format after loading
Loop points	Multiple settings possible	Of the multiple loop points, the settings for the first HOLD loop are used. If there is no HOLD loop, use the longest loop
Loop length	Settable with resolution of less than one sample	Resolution of less than one sample is ignored

note You can load multiple files within the directory. (☞p.145)

28) Load AKAI Program File: **selected icon** AKAI

The selected Program file will be loaded as a multisample. When the loaded data is saved to storage media, a Program file will be saved as a .KMP file, and a Sample file will be saved as a .KSF file.

① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.
The data will be loaded into the numbers that follow the last multisample or sample number currently existing in sample data RAM (i.e., that were previously sampled or loaded). In this case, only the valid program files and samples files will be loaded (Append load).
If the Sample files used by the Program file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure “If the file to load cannot be found,…” (☞p.141) to load the required Sample files.

Since overflow checking of sample data RAM is performed when loading each individual Sample file, it is possible that an overflow may occur in the middle of the loading process.

note If a loaded multisample is assigned samples whose sample names end in “-L” and “-R,” an “-L” and “-R” will automatically be added to the end (15th and 16th characters) of the multisample name.
When you load two multisamples whose multisample names are identical except for ending in “-L” and “-R,” they will be recognized in Sampling mode as a stereo multisample.

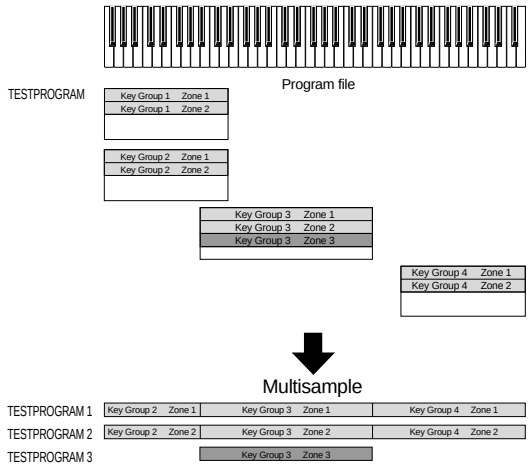
note You can load multiple files within the directory. (☞p.145)

About AKAI Program files

The TRITON Le will load only the key-map related parameters from the Program file.
AKAI format uses the concept of “key groups.” For each key zone, up to four samples can be assigned, and these four can be switched or crossfaded by velocity. Key zones can also be crossfaded.
On the TRITON Le, in contrast, there is one sample for each key zone, and you can use up to four multisamples to create a key map in the order of the velocity of each key group. It is not possible to crossfade key zones.

Example)

An AKAI format Program file “TESTPROGRAM” consists of four key groups, and each key group consists of up to three velocity zones. Key groups 1 and 2 are a layer whose low range is the same. When this is loaded into the TRITON Le, three multisamples will be created, collected by velocity zone, and the numerals 1, 2, and 3 will be appended to each multisample name. At this time, the top key will be determined by the bottom key of the sample that is assigned at the right, and if the bottom key is the same (key groups 1 and 2 in the diagram), the higher-numbered key group will be used.



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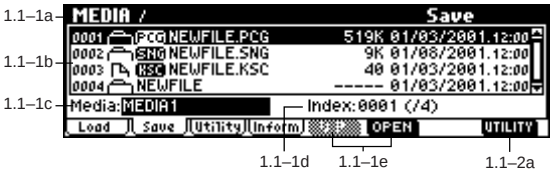
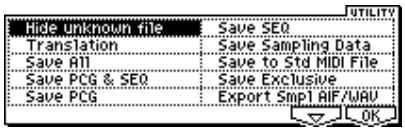
1.1–2: Save

Here you can save various data from internal memory to media such as SmartMedia. Use the [F5] (“UP”) key and [F6] (“OPEN”) key to move to the desired directory (i.e., change the current directory), and then select the Utility menu command [F8].
When you execute a Save operation, the data will be saved in the same level of the media hierarchy as the files that are displayed.
The date and time with which the saved file is stamped is specified by “Set Date / Time” (1.1–3a).



■ 1.1–2a: UTILITY



☞“Hide unknown file,” “Translation” (1.1–1f)

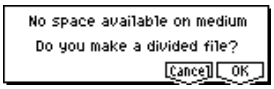
For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

When saving combinations with “Save All,” “Save PCG & SEQ,” or “Save PCG,” you should also try to save the programs used by each timbre (and the drum kits used by the programs) and the user arpeggio patterns at the same time.
Similarly when saving programs, you should also save the drum kit used by the program and the user arpeggio pattern at the same time.

If multisamples or samples created in Sampling mode (if the EXB-SMPL option is installed) are used in a program or drum kit, we recommend that you save the data as “Save All.”
Also when using “Save PCG” or “Save Sampling Data” to save an individual program, drum kit, or multisample or sample created in Sampling mode, we recommend that you save the data in the same directory with the same filename.
When using “Load PCG” to load a .PCG file, the .KSC file of the same name will be loaded at the same time so that the correct multisamples / samples with which the program or drum kit was saved will correspond correctly.

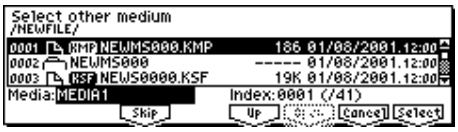
If the data does not fit on the media when saving

If you are saving .KSC, .KMP, and .KSF files and the data does not fit on a single SmartMedia (or other type of media), a dialog box will indicate “No space available on medium.”



① Make sure that you have additional SmartMedia etc., and press the [F8] (“OK”) key. Saving will begin.

② When the media is full, the following dialog box will appear. Remove the SmartMedia from the slot, insert another SmartMedia, and press the [MEDIA] key or function key to make the TRITON Le recognize the media. If you want to specify a different SCSI device (if the EXB-SMPL option is installed), use “Media Select” (1.1–1c) to specify it.



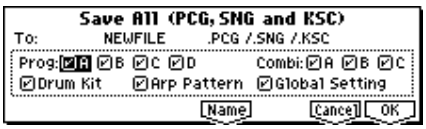
③ Use the [INC], [DEC] keys etc. to set Media Select to the save destination media.

④ Press the [F8] (“Select”) key. If you press the [F7] (“Cancel”) key the save operation will be cancelled. If you wish to end the save operation at this point, press the [F8] (“OK”) key. If you press the [F3] (“Skip”) key, the specified file will be skipped, and the next file will be saved.

Save All (PCG, SNG and KSC)

This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file, multi as a .SNG file, and multisamples and samples created in Sampling mode (if the EXB-SMPL option is installed) as a .KSC file to the specified media. This command is valid only when the current directory is a DOS directory.

① Select “Save All” to access the following dialog box.



② Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename (☞BG p.43). For example if you specify NEWFILE and execute the save command, files named NEWFILE.PCG, NEWFILE.SNG, and NEWFILE.KSC will be saved to the media.

③ Check the check boxes for the data that you want to save. There are check boxes for each program and combination bank, user drum kits, user arpeggio patterns, and global settings. Check those that you want to save.
Data that is not checked will not be saved.

④ To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.
If the data does not fit on a single SmartMedia (or other type of media), the “No space available on medium” dialog box will appear. Refer to “If the data does not fit on the media when saving,” and use the procedure given there to save the data.

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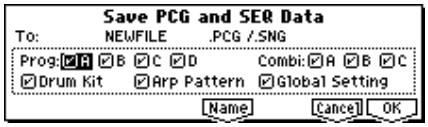
When you save, files will be created in the current directory. If the data you save extends across two or more media, these files will be divided. In addition to the .PCG, .SNG, and .KSC files that will be created with the specified filename, one directory will also be created. The files listed in NEWFILE.KSC will be saved in this directory.

Save PCG & SEQ

This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file, and saves songs and cue lists to a .SNG file on the specified media.
This command is valid only when the current directory is a DOS directory.

① Select “Save PCG & SEQ” to access the following dialog box.



② Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename (☞BG p.43). For example if you specify NEWFILE and execute the save command, files named NEWFILE.PCG and NEWFILE.SNG will be saved to the media.

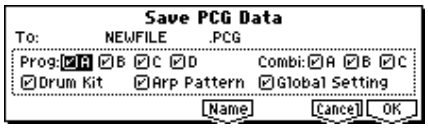
③ Check the check boxes for the data that you want to save. Data that is not checked will not be saved.
☞Save All (PCG, SNG and KSC): ③

④ To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

Save PCG

This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file.
This command is valid only when the current directory is a DOS directory.

① Select “Save PCG” to access the following dialog box.



② Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename (☞BG p.43). For example if you specify NEWFILE and execute the save command, a file named NEWFILE.PCG will be saved to the media.

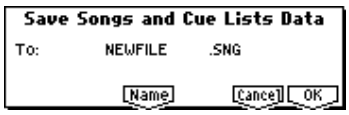
③ Check the check boxes for the data that you want to save. Data that is not checked will not be saved.
☞Save All (PCG, SNG and KSC): ③

④ To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

Save SEQ (Songs and Cue Lists)

This command saves all songs and cue lists from internal memory as a .SNG file.
This command is valid only when the current directory is a DOS directory.

① Select “Save SEQ” to access the following dialog box.



② Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename. For example if you specify NEWFILE and execute the save command, a file named NEWFILE.SNG will be saved to the media.

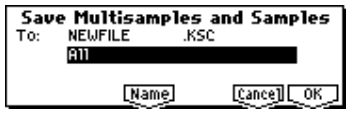
③ To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

Save Sampling Data (Multisamples and Samples)

When this command is executed, the following multisample and sample data will be saved to media as Korg format .KMP files, .KSF files, and a .KSC file that collects these files. This is valid only when the current directory is a DOS directory.

- Multisample and sample data recorded or edited in Sampling mode (if the EXB-SMPL option is installed)
- Multisample and sample data loaded in Media mode
- Multisample and sample data in internal sampling RAM memory

① Select “Save Sampling Data” to access the following dialog box.



② Use “To” to specify the contents that will be saved. (All content will be saved in Korg format.)
All: All multisamples and samples in sample data RAM will be saved as .KMP files and .KSF files. A .KSC file and directory will also be created at this time and saved.
The filename will be the .KSC filename and the directory name.
All Multisamples: All multisamples and samples (i.e., samples used by the multisamples) will be saved as .KMP files and .KSF files. Simultaneously, a .KSC file and a directory to contain these files will also be created and saved.
The filename will be the .KSC filename and the directory name.
All Samples: All samples will be saved as .KSF files. Simultaneously, a .KSC and directory to contain these files will also be created and saved.
The filename will be the .KSC filename and the directory name.
One Multisample: The selected multisample will be saved as a .KMP file. Simultaneously, a directory will also be created, and the samples used by the multisample will be saved in that directory.
The filename will be the .KMP filename and the directory name.
Initially, the filename will automatically be set to the first five characters (uppercase) of the sixteen-character multisample name + the multisample number.
[Examples]
000: NewMS_ _ _ _ _ _000 → NEWMS000.KMP

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001: 108bpmDrLoop00 → 108BP001.KMP
One Sample: The selected sample will be saved as a .KSF file.
The filename will be the .KSF filename name.
Initially, the filename will automatically be set to the first four characters (uppercase) of the sixteen-character sample name + the sample number.
[Examples]
0000: NewSample_0000 → NEWS0000.KSF
0001: C#3-EGuitar → C#3-0001.KSF

note If you wish to export the data in AIFF (.AIF) or WAVE (.WAV) format, select the Utility "Export Smpl AIF/WAV."

③ Press the [F5] ("Name") key to move to the text dialog box, and specify the filename (☞BG p.43).

④ To save the data, press the [F8] ("OK") key. To cancel without saving, press the [F7] ("Cancel") key.

If the Utility "Translation" (1.1–1f) is **checked**, the names of .KMP files and .KSF files you save will be displayed as the multisample name or sample name. This is convenient when you are searching for the desired files on media.

Save to Std MIDI File (Save Song as Standard MIDI File)

This command saves the selected song from internal memory to storage media as a .MID file (Standard MIDI File). This command is valid only when the current directory is a DOS directory.

① Select "Save to Std MIDI File" to access the following dialog box.

② In "Song," so the song that you wish to save.

③ Use the [F5] ("Name") key to access the text dialog box, and specify the filename (☞BG p.43).
By default, the first eight characters (uppercase) of the song name will be assigned.

④ In "Format," select the Standard MIDI File format in which you wish to save.
If you select **0**, data such as time signature and tempo will be saved together with the event data in a single track.
If you select **1**, time signature and tempo etc. and event data will be saved in separate tracks.

⑤ To save the data, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.
The song data you save here can be played back on a device that supports Standard MIDI Files. However if you intend to playback the data on this instrument, we recommend that you use "Save SEQ" to save the data, since this will allow a higher degree of reproducibility.

Save Exclusive (Receive and Save MIDI Exclusive Data)

This command receives exclusive data, accumulates it in the unused portion of the internal memory, and saves the data to media as an .EXL file.
The remaining amount of internal memory depends on how much data is used in Sequencer mode.
This command is valid only when the current directory is a DOS directory.

① When you select "Save Exclusive," this instrument will be ready to receive exclusive data. The following dialog box will appear.

② Transmit the exclusive data that you wish to save to this instrument. While the data is being received, the display will indicate "Status=RECEIVING MIDI DATA." When reception ends, the size of the received data and the size of the remaining free area will be rewritten. The display will change to "Status=AWAITING MIDI DATA," and you can continue transmitting exclusive data to this instrument. During reception, the [F7] ("Cancel") key and the [F8] ("OK") key cannot be pressed.

③ Press the [F5] ("Name") key to access the text dialog box, and specify the filename (☞BG p.43).

④ To save the data, press the [F8] ("OK") key. To cancel without saving, press the [F7] ("Cancel") key.

Export Smpl AIF/WAV (Export Samples as AIFF/WAVE)

Sample data in internal sampling RAM that was recorded or edited in Sampling mode (if the EXB-SMPL option is installed), or loaded in Media mode, can be exported (written) to media as an AIFF or WAVE format sample file.
This is valid only when the current directory is a DOS directory.

note Normally, it is recommended that you use Save All or Save Sampling Data to save sample data in Korg format (.KSC, .KMP, .KSF). This will allow you to save the data in a way that preserves the state of the multisamples (and the samples that they use) as they exist in internal sampling RAM memory.
Use "Export Smpl AIF/WAV" if you wish to use an AIFF or WAVE format compatible application on your computer to work with samples that were recorded or edited on the TRITON Le.

"Export Smpl AIF/WAV" does not export multisample files. The exported AIFF or WAVE format samples can be re-loaded, but if the sample number when saving is different than the sample number when loading, you may need to re-make settings, such as selecting the sample for each index of a multisample.
Furthermore, the following parameters set in Sampling mode are lost by "Export Smpl AIF/WAV."

- Sample Name
- Loop Tune (SMPL 3.1–1b. "Tune: Loop Tune")
- Reverse (SMPL 3.1–1b. "Rev: Reverse")

Samples that are handled by the TRITON Le as stereo will be exported as two independent L and R files.

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① Select “Export Smpl AIF / WAV” to access the following dialog box.

② In “Format,” select either AIFF or WAVE as the file format for export.

③ Press the [F5] (“Name”) key to move to the text dialog box, and specify the filename (☞BG p.43).

④ In “To,” specify the content that will be exported.
One Sample: The single selected sample will be exported.
The filename will be the filename of the .AIF or .WAV file. Initially, the filename will automatically be set to the first four characters (uppercase) of the sixteen-character sample name + the sample number.

[Examples]
0000: NewSample_0000→NEWS0000.AIF
0001: C#3-EGuitar→C#3-0001.WAV

If the sample data being exported will not fit on a single volume of media (e.g., SmartMedia), it cannot be exported.

All Samples: All samples will be exported.
It will not be possible to specify the filename. The filename will automatically be assigned as the first four characters (uppercase) of the sixteen-character sample name + the sample number.
Samples in One Multisample: All samples used by the selected multisample will be exported.
Only five characters of the filename can be specified. The five-character filename + the index number (001–128) in the multisample will be assigned automatically.
Initially, the filename will automatically be set to the MS + the multisample number (000–999).
[Examples]
000: NewMS___000:
Sample selected for index 001 → MS000001.AIF
Sample selected for index 002 → MS000002.AIF

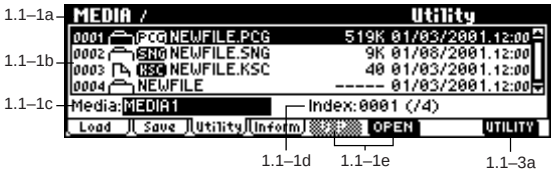
001: 108bpmDrLoop00:
Sample selected for index 001 → MS001001.AIF
Sample selected for index 002 → MS001002.AIF

When exporting **All Samples or Samples in One Multisample**, and all of the sample data does not fit on one volume of media (e.g., SmartMedia), another dialog box will appear, directing you to specify the next media. (☞p.148 “If the data does not fit on the media when saving”) However at this time if a single sample is larger than the capacity of the media, the sample cannot be exported. Either specify media with a larger capacity, or press “Skip” to omit exporting that sample and proceed to exporting the next sample.

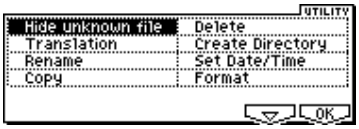
⑤ To export the data, press the [F8] (“OK”) key. To cancel without exporting, press the [F7] (“Cancel”) key.

1.1–3: Utility

Here you can rename, copy, or delete the selected media or file, create a new directory, and set the date and time.
After selecting a media or file, select the Utility menu [F8].



■ 1.1–3a: UTILITY



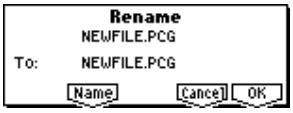
☞“Hide unknown file,” “Translation” (1.1–1f)

For details on how to select the desired utility function, refer to “PROG 1.1–1c: UTILITY.”

Rename

This command renames the selected file or directory.
This command is valid only when a DOS file or a DOS directory is selected.

① Select “Rename” to access the following dialog box.



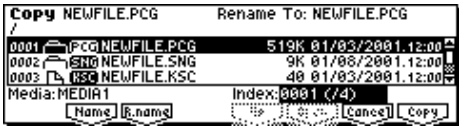
② Press the [F5] (“Name”) key to access the text dialog box, and modify the name (☞BG p.43).

③ To rename the file or directory, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Copy

This command copies the selected file or directory.
This command is valid only when a DOS file or a DOS directory is selected.

① Select “Copy” to access the following dialog box.



② In the upper left of the dialog box, “Copy” indicates the selected file and directory name.
If you wish to change the file or directory that will be copied, use the [F2] (“Name”) key to move to the text dialog box, and specify the filename that you wish to copy (☞BG p.43).
(Can use */? as Wildcard): When you use the [F2] (“Name”) key to access the text dialog box and specify the name of the file or directory to be copied, you can use “*” and “?” characters as wildcards. For example, if in the above example you specify NEWFILE1.* (instead of NEWFILE1.PCG), all filenames of NEWFILE1. with any

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filename extension will be copied at the same time: i.e., NEWFILE1.PCG, NEWFILE1.SNG, NEWFILE1.KSC, ...
[Example]
NEWFILE1.*: NEWFILE1.PCG, NEWFILE1.SNG, NEWFILE1.KSC, ...
NEWFILE?.PCG: NEWFILE1.PCG, NEWFILE2.PCG, NEWFILE3.PCG, ...

When wildcards are used, only files will be subject to copying. Directories will not be copied.

③ Use the [F5] (“UP”) key and [F6] (“OPEN”) key to select the copy destination directory. If you wish to specify a different SCSI device, use “Media Select” (1.1–1c) to select it (if the EXB-SMPL option has been installed).

It is not possible to open .PCG or .SNG files while you are selecting the copy destination directory. The [F6] (“OPEN”) key cannot be used for .PCG or .SNG files.

④ If you wish to copy the file or directory with a different name, use the [F3] (“R.Name”) key (in the lower line) to access the text dialog box, and specify the name with which the file or directory will be copied (☞BG p.43). If you are using wildcards to simultaneously copy multiple files, it is not possible to modify the filename.

⑤ To copy the data, press the [F8] (“OK”) key. To cancel without copying, press the [F7] (“Cancel”) key.

If the media that you selected in “Media Select” is removable media (SmartMedia, MO disc, removable hard disk etc.), it is not possible to copy to different media on the same drive.

Delete

This command deletes the selected file or directory.
If a directory is selected, it can be deleted only if no files exist within that directory.
This command is valid only if a DOS file or directory is selected.

① Select “Delete” to access the following dialog box.

② “Delete” will indicate the name of the selected file or directory.
If you wish to change the file or directory that is to be deleted, use the [F5] (“Name”) key to access the text dialog box, and specify the name of the file or directory that you wish to delete (☞BG p.43).
(Can use */? as Wildcard): When you use the [F5] (“Name”) key to access the text dialog box and specify the name of the file to be deleted, you can use the “*” or “?” characters as wildcards. This allows you to simultaneously delete multiple files with identical filenames and different extensions, or files whose names are partially identical (☞“Copy” (1.1–3a)).

When wildcards are used, only files will be subject to deletion. Directories will not be deleted.

③ To delete the selected file or directory, press the [F8] (“OK”) key. To cancel without deleting, press the [F7] (“Cancel”) key.

Create Directory

This command creates a new directory within the current directory.

① Select “Create Directory” to access the following dialog box.

② Use the [F5] (“Name”) key to access the text dialog box, and specify the name of the new directory (☞BG p.43).

③ To create the directory, press the [F8] (“OK”) key. To cancel without creating the directory, press the [F7] (“Cancel”) key.

Set Date/Time

This command sets the date and time that will be used to time-stamp files that are saved.

① Select “Set Date/Time” to access the following dialog box.

② Set each parameter.
“Year” 1980–2079
“Month” 1–12
“Day” 1–31
“Hour” 0–23
“Minute” 0–59
“Second” 0–59 (only even-numbered second values will be assigned to a file)

③ To set the date and time, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

The seconds (“Second”) will not be displayed in the directory window.

Format

This command formats the selected media, such as a SmartMedia or external SCSI device (if the EXB-SMPL option has been installed). The volume label (a name for the entire media) you specify will be assigned to the media. The volume label you assign here will be displayed in “Media Select” (1.1–1c). The volume label can be a maximum of eleven characters.

When you format, all data saved on that media will be erased. Be sure to double-check before you format.

After formatting, it is not possible to press the [COMPARE] key to return to the previous state.

① To format a SmartMedia, insert the SmartMedia to be formatted into the SmartMedia slot.

② In “Media Select” (1.1–1c), select the media that you wish to format. (If no external SCSI device is connected via the EXB-SMPL option, ignore this step.)

③ Select “Format” to access the following dialog box.

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④ Press the [F5] (“Name”) key to move to the text dialog box, and specify the “Volume Label” (☞BG p.43). When the dialog box appears, “Volume Label” will show the volume label that had been specified before formatting. If a media that has no volume label or a non-DOS media is inserted, this will indicate “NEW VOLUME.”

⑤ Specify the initialization format. Normally you should use **Quick Format** to initialize the media, and use **Full Format** if an error message of “Media not Formatted” appears.

Quick Format: Selects this if the media has already been physically formatted. Since only the system area of the media need be formatted, this will require less time.
Full Format: Selects this when formatting media that has not been physically formatted. You should also select this type of formatting if writing errors occur frequently with this media.

note It is not necessary to perform a **Full Format** on SCSI media that has been physically formatted at 512 bytes / block. Perform the **Quick Format** for such media.

The TRITON Le cannot format media with a format of other than 512 bytes / block (such as 640 MB, 1.3 GB MO disks etc.).

⑥ To format the media, press the [F8] (“OK”) key. To cancel without formatting, press the [F7] (“Cancel”) key.
A maximum of 4 GB can be formatted on an external SCSI device connected via the EXB-SMPL (sold separately).

1.1–4: Media Information

1.1–4a: Media (Media select)

This displays information on the media that is selected by “Media Select.”
☞1.1–1c: Media select

Vol. Label (Volume Label):

The volume label of the media.

SCSI ID:

The specified SCSI ID. If the TRITON Le’s internal SmartMedia slot is selected, “–” will be displayed.

Dev. Type (Device Type):

The type of media.

Product ID:

The vendor ID, product, and product version, etc.

Format (Format Type):

The type of format. If not formatted, this will indicate “Unformatted.”

Total Size:

The capacity of the media (in bytes).

Free Size:

The free capacity of the media (in bytes).

Write Protect:

The write protect status of the media. This will indicate “On” if protected, or “Off” if not protected.

Removable (Supports Removable):

This will indicate “Yes” if the media of the selected device can be removed (e.g., SmartMedia, MO disc, removable hard disk). If the media is fixed, this will be “No.”

■ 1.1–4b: UTILITY

Scan SCSI device

This command allows you to re-mount a connected SCSI device if the EXB-SMPL option is installed.

① From the Utility menu, select “Scan SCSI device.”
The currently-connected SCSI devices will be re-scanned (if the EXB-SMPL option is installed). Once scanning is completed, any valid SCSI device can be selected in “Media Select.”

Never connect or disconnect a SCSI cable while the power of the TRITON Le or of a SCSI device is turned on. Doing so can cause irreparable malfunctions.

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7. Effect Guide

Overview

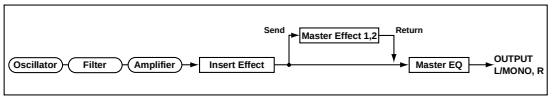
The effects section of TRITON Le consists of a single channel **Insert Effect**, two-channel **Master Effects**, a single-channel **Master EQ** (stereo, three-band EQ) and a **Mixer section** that controls the effect routings.
The insert effect and master effects can be chosen from **89** types of full-digital effect, grouped into the categories listed below.

Classification of 89 effects

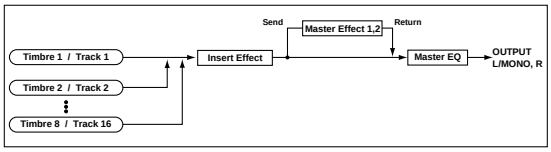
00–15	Filters and dynamics effect, such as EQ and compression
16–31	Pitch modulation and phase modulation effects, such as chorus and phaser
32–40	Other modulation and pitch-shifting effects, such as rotary speaker and pitch shifter
41–51	Early reflection and delay effects
52–57	Reverb effects
58–89	Mono effects and mono chain effects, in which two mono effects are internally connected in series

1. Effects in each mode

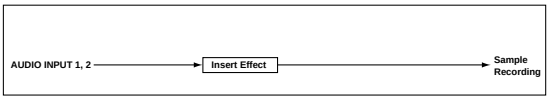
In **Program mode**, you can process sounds using **Insert Effect**. This is something like processing an oscillator (OSC) output sound using a filter and an amplifier. Then, you can apply a modulation and reverb effect or other **Master Effect**) to the processed sound to add ambience and space. Finally, before the sound is output from the OUTPUT (MAIN) L / MONO, and R connectors, you can fine-tune the tonal quality using the stereo, three-band **Master EQ**. You can adjust these settings for each Program individually.



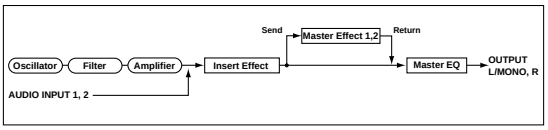
In **Combination mode** and **Sequencer mode**, you may process Program sounds for each timbre and track using the **Insert Effect**, add ambience and space to the entire sound using the **Master Effects**, and adjust the overall tonal quality using the **Master EQ**.
You can make these settings for each Combination in Combination mode, and for each Song in Sequencer mode individually.



If the separately sold EXB-SMPL option is installed, an **insert effect** can be applied in **Sampling mode** to the external source that is input for sampling via AUDIO INPUT 1 and 2. To do so, use the SMPL 1.1: Recording, Input / Pref (SMPL1.1–3) parameters. The settings here are effective only in Sampling mode.



If the separately sold EXB-SMPL option is installed, the external source from **AUDIO INPUT 1** and **2** is also valid in modes other than Sampling mode. In Program, Combination, and Sequencer modes, the **insert effect**, **master effects**, or **master EQ** can be used on these inputs. Settings for the external in from AUDIO INPUT 1 / 2 are made in GLOBAL 1.1: System, Audio In (Setup for COMBI, PROG, SEQ) (GLOBAL 1.1–4).
In these modes, the TRITON Le can function as a 2-in 4-out effect processor for the external input signal from AUDIO INPUT 1 and 2.



When you apply effects to the external audio signal from AUDIO INPUT 1 and 2, oscillation may be heard depending on the effect type and the parameter settings. If this occurs, adjust the input level, output level, and effect parameters. In particular, please exercise caution when using high-gain effects.

2. Dynamic modulation (Dmod)

Dynamic modulation (Dmod) is a function that lets you use the controllers of this instrument or MIDI messages to control specific effect parameters*1, allowing realtime control while you play.
The BPM / MIDI Sync function*2 is provided as another way to control effect parameters. This allows parameters such as the LFO speed of modulation-type effects or the delay time of delay-type effects to be synchronized to the tempo of the arpeggiator.
For details on these two functions, refer to "Dynamic Modulation Source (Dmod)" (☞p.217).

*1 These effect parameters are marked with D-mod (☞p.164–).

*2 The effect parameters marked with Sync support this function (☞p.168–).

3. Effect I / O

To achieve the best tonal quality, signals sent to the Insert Effect and the Master Effects should be output at the maximum level without clipping. Also, use the "W / D" (wet / dry) parameter for the Insert Effect and the "Output Level" or "Rtn (Return1, 2)" parameter for the Master Effects to adjust the effect output level.

This instrument does not have an input level meter that monitors the input level of the effect. If the input level is insufficient, the S / N (signal to noise) ratio will decrease. If the input level is excessive, distortion may occur.

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The following table shows the parameters related to the level settings:

Program mode

Input	OSC1/2 High, Low Level	(PROG 2.1)
	Filter1/2 Trim	(PROG 4.1, 4.2)
	Amp1/2 Level	(PROG 5.1, 5.2)
	OSC1/2 Send1/2	(PROG 7.1)
	Effect Trim parameter *1	(PROG 7.1, 7.2)
Output	Effect W/D parameter	(PROG 7.1, 7.2)
	Rtn1/2 (Return1, 2)	(PROG 7.2)

Combination mode

Input	Volume	(COMBI 1.1, 2.1)
	S1/2 (Send1/2)	(COMBI 7.1)
	Effect Trim parameter *1	(COMBI 7.1, 7.2)
Output	Effect W/D parameter	(COMBI 7.1, 7.2)
	Rtn1/2 (Return1, 2)	(COMBI 7.2)

Sequencer mode

Input	Volume	(SEQ 1.1)
	S1/2 (Send1/2)	(SEQ 7.1)
	Effect Trim parameter *1	(SEQ 7.1, 7.2)
Output	Effect W/D parameter	(SEQ 7.1, 7.2)
	Rtn1/2 (Return1. 2)	(SEQ 7.2)

Sampling mode (if the separately sold EXB-SMPL option is installed)

Input	Rear panel AUDIO INPUT LEVEL	
	Input1/2 Lvl (Level)	(SMPL 1.1)
	Effect Trim parameter *1	(SMPL 7.1)
Output	Effect W/D parameter	(SMPL 7.1)

Global mode *2 (if the separately sold EXB-SMPL option is installed)

Input	Rear panel AUDIO INPUT LEVEL	
	Input1/2 (Level)	(GLOBAL 1.1)
	Input1/2 Send1/2	(GLOBAL 1.1)

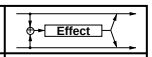
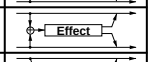
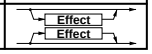
*1:Some effects may not have these parameters.

*2:Use this parameter to set the Audio Input Level in all modes other than Sampling mode.

Insert Effect (IFX)

1. In / Out

Insert Effect (**IFX**) have a **stereo input** and a **stereo output**. If you select **Dry** (no effect) for the "W / D" parameter, the stereo input signal will be output in stereo without being processed by the effect. If you select **Wet** (effect applied), the processed signal will be output in one of the following ways:

Wet	Mono In - Mono Out	
	Mono In - Stereo Out	
	Stereo In - Stereo Out	

If you select **00: No Effect**, stereo input signals are output in stereo without being processed.
The possible routing of effect inputs and outputs is indicated in the upper left corner of the block diagram.

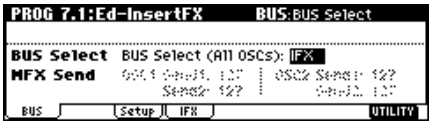
These can be switched **on/off** by the "On / Off" settings in 7.1: Ed-InsertFX (or Insert FX), Setup pages IFX in each mode. When **off**, the effect will be bypassed. In the same way as for **00: No Effect**, the stereo input sound will be output in stereo without modification.

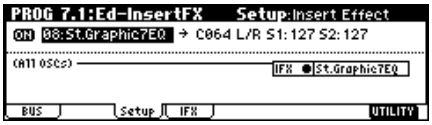
MIDI Separately from this "On / Off" setting, MIDI control change CC#92 can be received to turn all IFX effect off. A value of 0 is off, and a value of 1–127 restores the original setting. You can also use "FX SW" (GLOBAL 1.1–1b) to turn off IFX in the same way. This is controlled on the global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a).

2. Routing

2–1. Program mode

Use **"BUS Select"** (PROG 7.1–1a) to set the destination bus of the oscillator output.





L/R: The signal is not sent to the Insert Effects. Instead, it is sent to AUDIO OUTPUT (MAIN) L / MONO and R after the Master EQ.
IFX: The signal is sent to Insert Effect IFX.
1, 2, 1/2: The signal is sent to AUDIO OUTPUT (INDIVIDUAL) 1, 2 (☞p.162 "Individual Outputs"). The signal is not sent to the Insert Effect, Master Effects, and or Master EQ.
Off: The signal is not sent to AUDIO OUTPUT (MAIN L / MONO, R, (INDIVIDUAL) 1 or 2. (After the Master Effects, the signal is output to AUDIO OUTPUT (MAIN).) Select this option if you connect the Insert Effect with the Master Effects in series, with the send level specified by "MFX1 Send1"and "MFX2 Send2."

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Use **MFX1 Send "Send1"** and **"Send2"** (PROG 7.1–1a) to specify the send level for the Master Effects. This setting is effective if "BUS Select" (PROG 7.1–1a) is set to **L/R** or **Off**. If "BUS Select" is set to **IFX**, use "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))"(PROG 7.1–2) for the post-IFX signal (☞"3. Mixer").

MIDI Send Level 1 can be controlled by MIDI Control Change CC#93, and Send Level 2 can be controlled by MIDI Control Change CC#91. At this time, the actual send level is determined by multiplying the Send Level 1 or 2 value of the oscillator with the Send Level 1 or 2 value received via MIDI.

— Settings for drum programs —

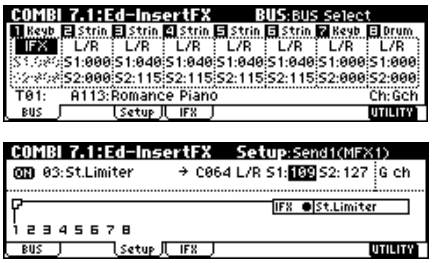
If you have selected "**Drums**" for "Oscillator Mode" (PROG 2.1–1a) of a Program, the "Use DKit Setting" (PROG 7.1–1b) box becomes available. If you **check** this box, "BUS Select" (GLOBAL 5.1–3a) for each key of the selected DrumKit becomes effective. For example you can send snare-type sounds to IFX to apply a gate effect, and send the other sounds to AUDIO OUTPUT (MAIN) L / MONO and R without applying the insert effect. If you **de-select the box**, all drum instrument outputs are sent to the bus specified by "BUS Select" (PROG 7.1–1a). You may apply the Insert Effect to all drum instruments, regardless of the DrumKit settings.

2–2. Combination, Sequencer mode

Use the "BUS Select" settings (COMBI 7.1–1a, SEQ 7.1–1 (2)a) settings of the Timbre (Combination) / Track (sequencer) to specify whether the insert effect will be applied to a timbre / track.
In the same way as for Program mode, you can select from **L/R**, **IFX**, **1**, **2**, **1/2**, or **Off** for each timbre / track.
"S1 (Send1(MFX1))," "S2 (Send2(MFX2))" become available if "BUS Select" has been set to **L/R** or **Off**.
If **IFX** is selected, use "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" for the post-IFX signal (☞"3. Mixer").

MIDI Send level 1 is controlled by MIDI control change CC#93, and send level 2 by MIDI control change CC#91. At this time, the actual send level will be the send level 1 or 2 of the program oscillator used by the timbre / track multiplied by the send level 1 or 2 that is set via MIDI. ("Send Level" ☞p.159)

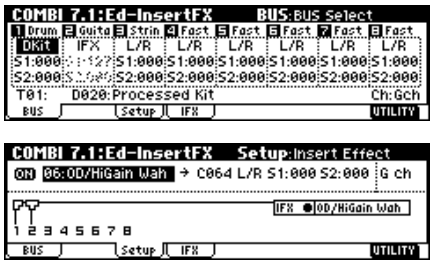
The following illustration is an example in Combination mode. "BUS Select" settings have been made to send the output of timbre 1 to **IFX** and the other timbres to **L/R**. The output passes through the master EQ, and is sent to AUDIO OUTPUT (MAIN) L / MONO and R. It is not sent to the insert effect.



— Settings for drum Programs —

If a drum Program ("OSC Mode" **Drums**) is selected for timbres in **Combination mode** and for tracks in **Sequencer mode**, you can select "**DKit**" for "BUS Select." If you select "DKit," the "BUS Select" (GLOBAL 5.1–3a) settings for each key become effective, and each drum instrument sound will be routed to the corresponding buses (e.g.: the snare sound is sent to IFX, and other sounds to L / MONO and R). If you select anything other than **DKit**, you may apply the Insert Effect to all drum instruments, regardless of the DrumKit settings.

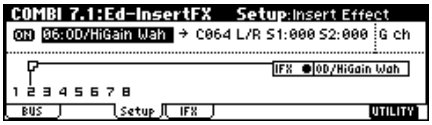
If "BUS Select" is set to **DKit**, you will be able to select "DKit IFX Patch." This temporarily patches the "BUS Select" IFX settings to send them to L / R.
For example, suppose you have assigned a drum program to timbre 1 and a conventional program to timbre 2, and set "BUS Select" to **DKit** for timbre 1 and to IFX for timbre 2. Since timbre 1 is set to **DKit**, the "BUS Select" (GLOBAL 5.1–3a) setting of the drum kit will be used.



If, for example, you have specified **IFX** for snare-type sounds, use "DrumKit IFX Patch" when you do not want the insert effect used by timbre 2 to be used for the drum program. Select the Utility "DKit IFX Patch," and temporarily send the drum kit IFX to L / R. Press the [F8] ("OK") key to execute, and the snare sounds will be sent to **L/R**. When you want to return to the original sounds, select IFX→**IFX**.

DrumKit IFX Patch dialog box

After settings are made



Effect

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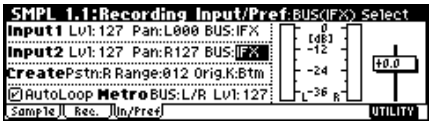
2–3. Sampling mode (if the separately sold EXB-SMPL option is installed)

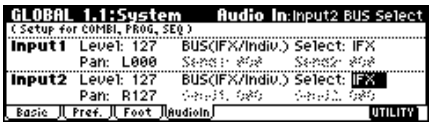
You can sample sound while applying the Insert Effects to the signal input from AUDIO INPUTs 1 and 2.
Use “BUS (IFX) Select” (SMPL 1.1–3a) to set Inputs 1/2, and the buses by selecting from **L/R**, **IFX**, and **Off**. You cannot select 1, 2, or 1/2 (output to OUTPUTs 1, 2).

In the following example, input signals at Inputs 1 and 2 are routed to **IFX**. The Insert effect parameters are set in “SMPL 7.1: Insert Effect” and the Insert effect is applied to the input signals for sampling.



2–4. Audio Input (if the separately sold EXB-SMPL option is installed)

In Program, Combination and Sequencer modes, you can apply the Insert Effect, Master Effects and Master EQ to the signals input from AUDIO INPUTs 1 and 2. These signals are routed to the TRITON Le’s effect, according to the GLOBAL 1.1: System, Audio In page setting.



Use “BUS (IFX / Indiv.) Select” (GLOBAL 1.1–4a / b) to set Inputs 1/2 buses by selecting from **L/R**, **IFX**, **1**, **2**, **1/2**, and **Off**.

“Send1” and “Send2” become effective only when “BUS (IFX / Indiv.) Select” (GLOBAL 1.1–4a / b) is set to **L/R** or **Off**. If **IFX** is selected, use “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” for the post-IFX signal (☞“3. Mixer”).

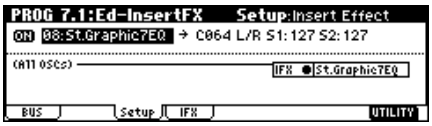
This setting is ignored in Sampling mode. Refer to “2–3. Sampling Mode” for information on the Sampling mode settings.

Use “7.1: Ed–InsertFX (or Insert FX)” in Program, Combination, or Sequencer mode to set up the Insert Effect. You can apply 2-in / 4-out effects to the incoming signal from Inputs 1 and 2. You may also combine these signals with the internal sound.

3. Mixer

For each mode, use 7.1: Ed-InsertFX (or Insert FX) Setup page parameters “Pan (CC#8),” “BUS Select,”“S1 (Send1(MFX1)),” and “S2 (Send2(MFX2))” to specify the pan, bus select, and the send levels to master effects MFX1 and MFX2 for the signals that have passed through the insert effect.

In Sampling mode (if the separately sold EXB-SMPL option is installed), you cannot use the Master Effects or route signals to INDIVIDUAL 1and 2. You can set only the pan setting for the post-IFX signals.

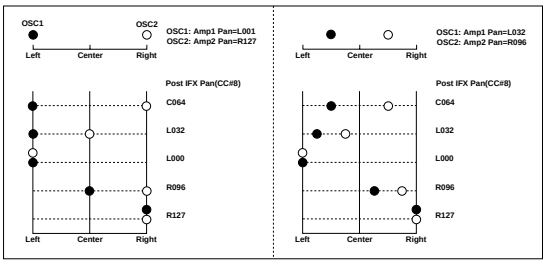


3–1. Pan (CC#8)

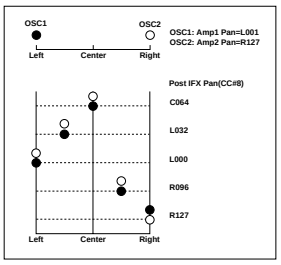
Specifies the pan after passing through the insert effect.
If the insert effect is a **Stereo In–Stereo Out** type (☞”In / Out”), setting this parameter to **C064** will allow the “Pan” settings of the oscillator (PROG 5.1–1, PROG 5.2–1), timbre (COMBI 1.1–3, 2.1–2), track (SEQ 1.1–4 / 5) or audio input (if the separately sold EXB-SMPL option is installed, SMPL 1.1–3, GLOBAL 1.1–4) to be used.

If the insert effect is a **Mono In-Stereo Out** or **Mono In-Mono Out** type (☞“In / Out”), the “Pan” of the oscillator, timbre, track, or audio input (if the separately sold EXB-SMPL option is installed) will be ignored, and the sound will always be panned to the center. In this case, the “Pan (CC#8)” (7.1–1) that follows the insert effect will determine the final panning. **L001** is far left and **R127** is far right.

Insert Effect = Stereo In - Stereo Out



Insert Effect = Mono In - Stereo Out
Mono In - Mono Out



MIDI You can control these parameters via MIDI Control Change CC#8.

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3–2. BUS Select

This parameter enables you to specify the destination bus for the post-IFX signals.
"**L/R**" is a common setting to send signals to the Master EQ before they are routed to the OUTPUT L / R outputs.
Select **1**, **2** or **1/2** to route the signals to AUDIO OUTPUT (INDIVIDUAL) 1 or 2 (☞p.162 "Individual Outputs"). Select "**Off**" so that no signals will be output to L / MONO, R, 1 or 2. In this case, the signals are routed from the Master Effects to AUDIO OUTPUT (MAIN). This setting is used when you are connecting the Insert Effect with the Master Effects in series using "S1 (Send1(MFX1))" and S2 (Send2(MFX2))."

3–3. Send level

These parameters enable you to set the send level of the signals routed to Master Effects MFX1 and MFX2. These settings are effective only when "BUS Select" is set to **L/R** or **Off**.
If you are not using insert effect, set the PROG 7.1–1 MFX Send "Send 1" and "Send 2" parameters, the COMBI 7.1–1 "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" parameters, or the Sequencer mode SEQ 7.1–1 / 2, "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" parameter to set the send levels to master effects MFX1 and MFX2.
(If the separately sold EXB-SMPL option is installed, the send levels of the audio input in Program, Combination, and Sequencer modes are set by GLOBAL 1.1–4a / b.)

MIDI Send Level 1 can be controlled by MIDI Control Change CC#93 and Send Level 2 can be controlled by MIDI Control Change CC#91.

4. Controlling the Insert Effects via MIDI

Using the Dynamic Modulation (Dmod) function enables you to control all effect parameters in real-time during performance from the controllers of this instrument or a connected MIDI sequencer. You can also control the "**Pan (CC#8)**," "**S1 (Send 1(MFX1))**," and "**S2 (Send 2(MFX2))**" of the post-IFX signals in the same way.

4–1. Program mode and Sampling mode (if the separately sold EXB-SMPL option is installed)

You can control the parameters on global MIDI channel (MIDI Channel" (GLOBAL 2.1–1a).

4–2. Combination mode

Use Setup page "Control Channel" to set up the control channel for IFX. Select an appropriate option from **Ch01–16**, **Gch**, and **All Rt**.
Ch01–16: Select one of these settings when you want to use a single channel for control. An asterisk "*" will be displayed at the right of the channel number of timbres routed to the insert effect.
Gch: Selects this option if you wish to control the parameters on global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a). This is a common setting.
All Rt.: Select this option to control the parameters on the channels (Ch01–16 that have a "*" mark) for the timbres that are routed to the corresponding Insert Effect.

4–3. Sequencer mode

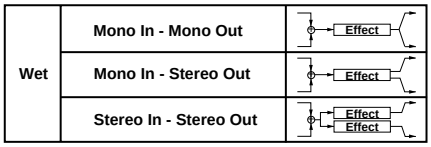
Use Setup page "Control Channel" to set up the control channel for IFX. Select an appropriate option from **Ch01–16 and All Rt.**.
Ch01–16: Select one of these settings when you want to use a single channel for control. An asterisk "*" will be displayed at the right of the channel number of timbres routed to the insert effect. This option is suitable if multiple tracks on different MIDI channels are sent to the Insert Effects and you wish to control the parameters using one of the tracks.
All Rt.: Selects this option to control the parameters on the channel numbers (Ch01–16 that have a "*" mark) for the tracks that are routed to the corresponding Insert Effect.
"**All Rt.**" is a typical option. If you wish to control the parameters on a channel, select one from **Ch01–16**.

Master Effects (MFX1, 2)

1. In / Out

The I / Os of **Master Effects MFX1** and **MFX2** are **mono-in/stereo-out**. "Send Level 1" and "Send Level 2" determine the send level to the Master Effects (☞"Routing" and "Mixer"). Stereo signals will be combined to a mono signal automatically and sent to the effects.
The Master Effects do not output any **Dry** signals (signals that are not processed by the effects). Therefore, they output only **Wet** (signals that are processed by the effects) signals (set via the "W / D" of the "MFX1" and "MFX2" page). The output signals from the Master Effects are routed to the **L/R** bus with the output level specified by "Rtn (Return1, Return2)." These output signals are mixed with the output signals from the bus specified by BUS page **L/R**, or with the output signals from the bus specified by "BUS Select" (Setup page in each mode) **L/R**, then routed to the Master EQ.

Selecting "**00: No Effect**" will mute the output. The processed signal will be output in one of the following ways, according to the type of **effects 01–89**.



The possible routing of effect signal inputs and outputs is indicated in the upper left corner of the block diagram.

MFX1 and 2 are switched **on/off** by the "On / Off" parameter in the 7.2: Ed-MasterFX (or Master FX) Setup page "On / Off" of each mode. When **off** is selected, the output will be muted in the same way as for **00: No Effect**.

MIDI Separately from this "On / Off" setting, MIDI control changes CC#94 (MFX1) and CC#95 (MFX2) can be received to turn each master effect off. A value of 0 is off, and a value of 1–127 restores the original setting. You can also use "FX SW" (GLOBAL 1.1–1b) to turn off MFX1 and MFX2 in the same way. This is controlled on the global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a).

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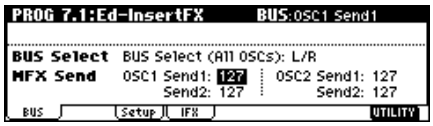
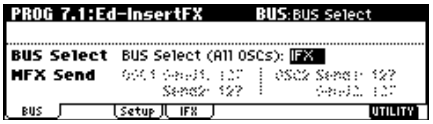
2. Routing

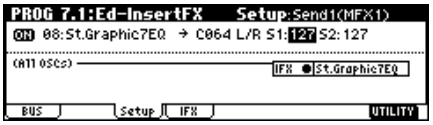
Two master effects (MFX 1 and 2) can be used in any mode other than Sampling (if the separately sold EXB-SMPL option is installed). If you are not using the Insert Effect in any mode, the Master Effects send levels are determined by the "Send Level 1/2 (MFX2)" parameters specified independently for the oscillators (Program), timbres (Combination), tracks (Sequencer). For example, you can apply substantial reverberation to a piano sound assigned to the timbre and tracks, a small amount of reverberation to the strings sound, and no reverberation to the bass sound. If you are using the Insert Effect, set the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" parameters for the post-IFX signals.

2–1. Program mode

The PROG 7.1–1a MFX Send parameters "Send 1" and "Send 2" or the PROG 7.1–2a "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" parameters that follow IFX determine the send levels to the master effects.
The PROG 7.1–1a MFX Send "Send 1" and "Send 2" settings are used when "BUS Select" is set to **L/R** or **Off**. Each can be set for oscillator 1 and 2.
The PROG 7.1–2a "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" settings that follow **IFX** are used when "BUS Select" is set to IFX. If the insert effect are chained (connected in series), the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" that follows the last-connected IFX will be used.
If "BUS Select" is **1**, **2** or **1/2**, the oscillator will be directly output to AUDIO OUTPUT (INDIVIDUAL)**1**, **2** (☞p.162 "Individual Outputs"). Send levels 1/2 will be ignored, and the master effects will not be applied.







MIDI Send Level 1 can be controlled by MIDI Control Change CC#93 and Send Level 2 can be controlled by MIDI Control Change CC#91 on global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a). At this time, the actual send level uses the value of the Send 1 and 2 settings for Oscillators 1 and 2, multiplied by the Send Level 1 and 2 values received via MIDI.

– Setting for drum program –

If the program "Oscillator Mode" (PROG 2.1–1a) is **Drums**, the "USE DKit Setting" (PROG 7.1–1b) will be used.
If this is **checked**, the setting for each key of the selected drum kit will be used. The drum instrument for a key whose drum kit "BUS (Bus Select)" (GLOBAL 5.1–3a) parameter is set to **L/R** or **Off** will use the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" (GLOBAL 5.1–3a) settings. If **IFX** is used, the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" (PROG 7.1–2a) after passing through IFX will be used.
If this is **not checked**, the "Send 1" and "Send 2" (PROG 7.1–1a, MFX Send) settings or the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" (PROG 7.1–2a) settings after passing through IFX will be used for all drum instruments. (This is the same as when "Oscillator Mode" is **Single** or **Double**.)

2–2. Combination, Sequencer mode

Use "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" (7.1–1(2)a) for timbres (Combination) and tracks (Sequencer) to set the Send level for each timbre and track. As with Program mode, if "BUS Select" is set to **L/R** or **Off**, "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" become effective. In this case, the actual send level will be the setting of the program (PROG 7.1–1a) used by the timbre/track multiplied by the send level you specify here.

– Send level –

For example, if a Program's "OSC1 Send1" is set to **127**, "Send2" set to **064**, "OSC2 Send1" set to **064**, "Send2" set to **127**, a Combination's "Send1" set to **064**, and "Send2" set to **127**, the actual send levels of the combination are calculated as follows:

OSC1 Send1=127 (100%)*064(50%)=064(50%)
OSC1 Send2=064 (50%)*127(100%)=064(50%)
OSC2 Send1=064 (50%)*064(50%)=032(25%)
OSC2 Send2=127 (100%)*127(100%)=127(100%)

If **IFX** is selected for "BUS Select", use the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" parameters for the post-IFX signals.
If **1**, **2** or **1/2** is selected instead, these settings are ignored and the Master Effect is not applied.

MIDI Send Level 1 responds to MIDI Control Change CC#93, and Send2 Level responds to MIDI Control Change CC#91. If "Send1(MFX1)" and "Send2(MFX2)" for each timbre/track are effective, the parameter will be controlled on the MIDI channels set for the corresponding timbres and tracks. If the "Send1(MFX1)" and "Send2(MFX2)" parameters for the post-IFX signals are effective, they can be controlled on the MIDI channels assigned to IFX.

The following screens are examples in Combination mode. The "BUS Select" setting in screen shot (1) sends timbre 1 to **IFX**, and the remaining timbres to L/R. In this case, the send levels from timbre 1 to the master effects are set by "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" after the signal has passed through IFX: **01:St. Amp Simulation** as shown in screen shot (2). (In this example, these are set to **032** and **127** respectively.) Other timbres will use the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" settings shown in screen shot (1). (At this time, the send level will be the send level of the program oscillator multiplied by this send level.)

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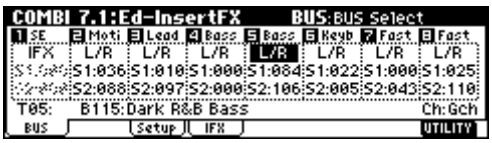
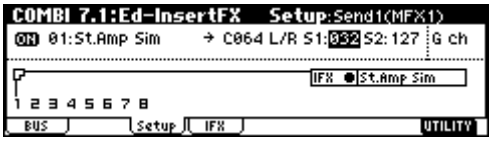
(1)



(2)



– Setting for drum program –

If a drum program has been selected for a timbre in Combination mode or for a track in Sequencer mode, you will be able to select **DKit** for the "BUS Select" parameter. If this is selected, the "BUS (BUS Select)" (GLOBAL 5.1–3a) settings for each individual key will be used, and will be sent to the bus for each drum instrument. In this case, the send level will be determined by multiplying the value of the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" settings of each key in the drum kit by the value of the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" settings that you make here. (For the drum instruments of keys whose drum kit "BUS (BUS Select)" parameter is set to **IFX**, this is determined by "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" after the signal has passed through IFX.) If **L/R** or **Off** is selected, the send levels specified by PROG 7.1–1a "OSC1 Send 1" and "Send 2" will be multiplied by the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" settings that you make here. (This is the same as when "Oscillator Mode" is **Single** or **Double**.) If **IFX** are selected, the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" after the specified insert effect will be used. If **1**, **2** or **1/2** are selected, "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" will be ignored.

2–3. Sampling Mode (if the separately sold EXB-SMPL option is installed)

You cannot use the Master Effects and Master EQ in Sampling mode.

2–4. Audio Input (if the separately sold EXB-SMPL option is installed)

In Program, Combination, and Sequencer modes, you can apply the Insert Effect, Master Effects and Master EQ to the signals input from AUDIO INPUTs 1 and 2. These signals are routed to the TRITON Le's effects, according to the GLOBAL 1.1: System, Audio In page setting.
The send levels from input 1 and 2 to the master effects are specified by the "Send 1" and "Send 2" (GLOBAL 1.1–4a / b) values. These settings become effective only when "BUS Select" is set to **L/R** or **Off**. If **IFX** is selected, use the "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" parameters (☞"3. Mixer"). If **1**, **2**, or **1/2** is selected, the Send Level 1 and Send 2 settings are ignored.

These settings are ignored in Sampling mode.

Use 7.2: Ed–MasterFX (or Master FX)in Program, Combination, and Sequencer modes to set the Master Effects and Master EQ.

3. Mixer

The send levels determine the input levels of oscillators (Program), timbres (Combination), tracks (Sequencer) that are routed to the Master Effects. The 7.2: Ed–MasterFX (or Master FX) in all modes enable you to set the output levels and Master EQ gain values, and connect the Master Effects in series (chain).

3–1. Rtn (Return1, Return2)

These specify the output levels from MFX1 and MFX2 respectively. The left value of the "W / D" specified for the effect selected in MFX 1 or 2 will be the output level of the master effect; e.g., 25% for **25:75**, 100% for **Wet**, and 0% for **Dry**. This level multiplied by the "Rtn (Return 1, Return 2)" value will be sent to the L / R bus, and will be mixed with the 7.1–1a "BUS Select" **L/R** or 7.2–1a"BUS Select" **L/R** output sound.
For example, with MFX1 "W / D" set to **50:50** (50%) and "Rtn (Return1)" set to **64** (50%), the resultant effect level will be 25%. The effect level is maximum (100%) when "W / D" is set to "**Wet**" and "Rtn (Return1)" is set to **127**.

3–2. MFX Chain

If you **check** the "MFX Chain" check box, the signal will be routed between MFX1 and MFX2.
The following figure indicates that the output from "MFX1:**16: Stereo Chorus**" is added to "MFX2: **52: Reverb Hall**" input.

3–3. Chain Direction

Specify the direction of the connection when the signal is routed between MFX1 and MFX2.

3–4. Chain Signal

This parameter enables you to select signals routed between MFX1 and 2. If the chain direction (order) is from **MFX1** to **MFX2**, selecting **LR Mix** will cause the stereo L / R outputs from MFX1 to be mixed and input to MFX2. This setting is useful when you wish to serially connect delays that are panned to L and R (e.g., "**43: LCR Delay**"). Selecting **L Only** or **R Only** will cause only one channel of stereo outputs from MFX1 to be input to MFX2. This setting is suitable for a chain connection of a reverb effect and a modulation effect such as **16: St. Chorus**.

3–5. Chain Level

This parameter determines the level of signals routed from one MFX to the other MFX in a chain connection.

3–6. Master EQ Gain[dB]

These parameters are used to set the gain of the Low, Mid, and High stereo three-band EQ that is located right before AUDIO OUTPUT (MAIN) L / MONO and R. Low and High EQs are of the shelving type, and Mid EQ is a band type equalizer. These settings are linked with the Low, Mid, and High "Gain" parameters of the MEQ page. Use this MEQ page to set the center frequency, band width (for Mid), and dynamic modulation of the EQ bands.

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4. Controlling the Master Effects via MIDI

You can use the Dynamic Modulation (Dmod) function to control all Master Effects parameters in real-time from this instrument's controllers or from an external MIDI sequencer.

In **Program mode**, the parameters are controlled on global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a).
In **Combination mode**, and **Sequencer mode**, you can set the control channels for MFX1 and MFX2 using the Setup page "Control Channel" parameters of the "MFX1–2" tabs. Select the desired option from **Ch01–16**, and **Gch**.

Ch01–16: Select this option if you wish to control the parameters for each Master Effect on different channels.
Gch: Select this option if you wish to control the parameters on global MIDI channel "MIDI Channel" (GLOBAL 2.1–1a). This is the normal setting.

Master EQ

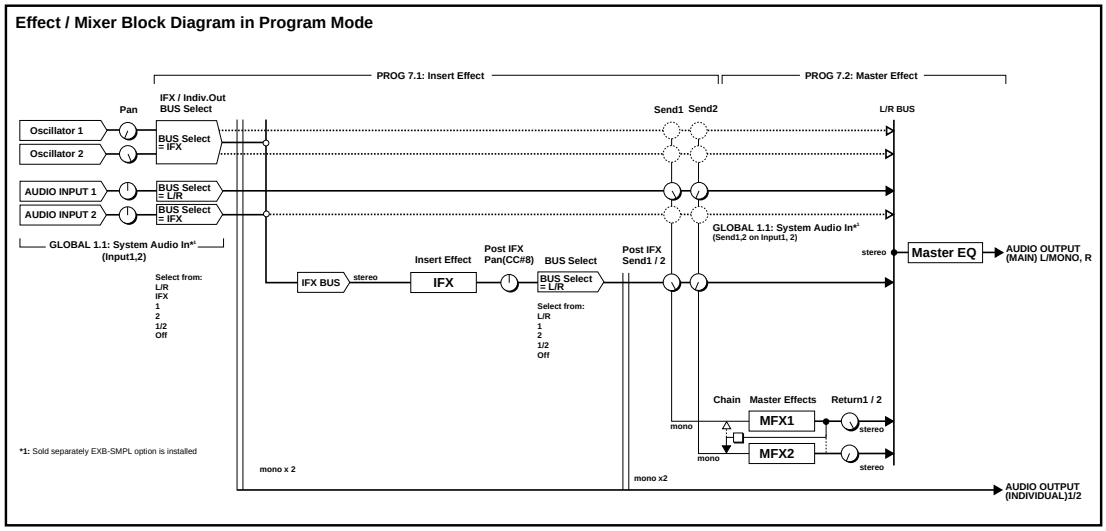
The Master EQ (stereo, three-band EQ) is located right before AUDIO OUTPUT (MAIN) L / MONO, R. Low and High EQs are of the shelving type, and Mid EQ is a peaking type equalizer. You can control the Low Gain and High Gain parameters using the Dynamic Modulation function.
The Master EQ (stereo, three-band EQ) is applied to the signal input from the L / R bus. For more information on the parameters, p.209.

Individual Outputs

The TRITON Le is equipped with two individual AUDIO OUTPUTs (INDIVIDUALs). You can route the oscillator (Program), timbre (Combination), and track (Sequencer) output or the post-IFX signals to these two individual outputs.
Use "BUS Select" (7.1–1a) in Program, Combination, or Sequencer mode to route the oscillators (Program), timbres (Combination), or tracks (Sequencer) to AUDIO OUTPUTs (INDIVIDUAL).
If you are using the Insert Effects, use "BUS Select" of the 7.1: Ed–InsertFX (or Insert FX), and Setup page to route the post-IFX signals.
1, 2: Monaural signals are routed to AUDIO OUTPUTs (INDIVIDUAL).
1/2: Stereo signals are routed to AUDIO OUTPUTs (INDIVIDUAL).

Program mode

Effect / Mixer Block Diagram in Program Mode



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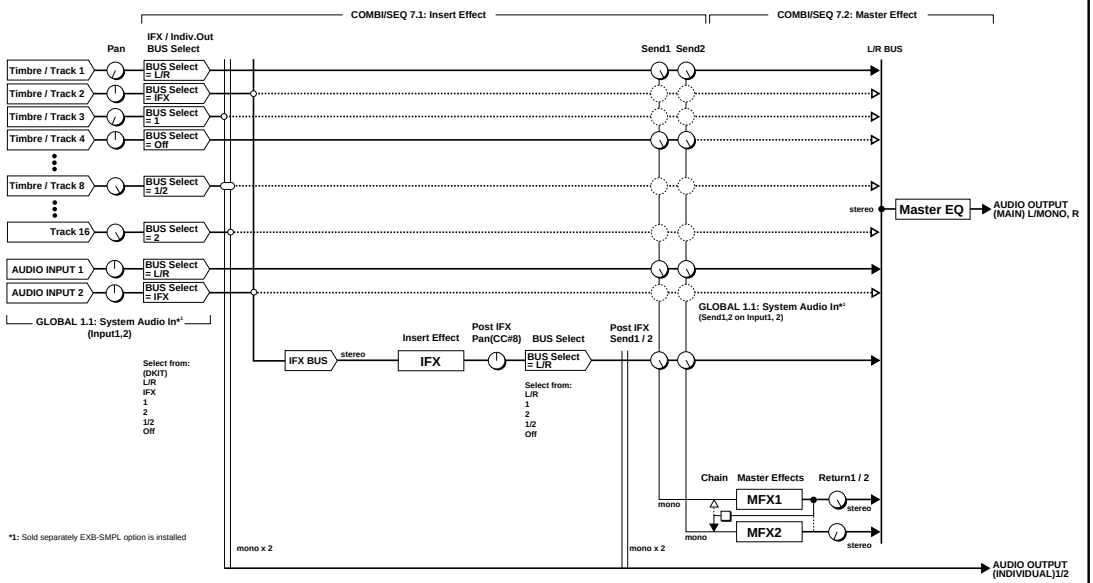
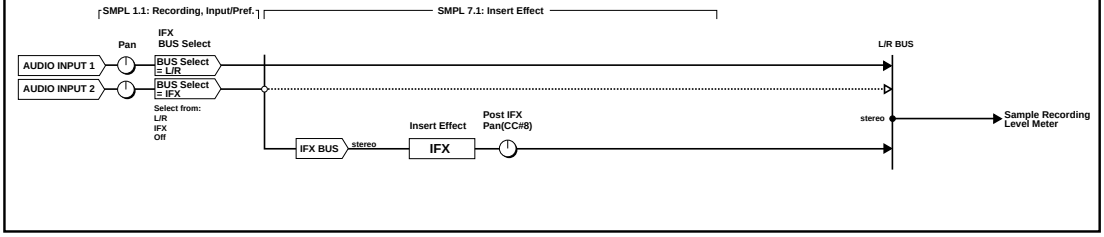
Combination, Sequencer mode

Effect / Mixer Block Diagram in Combination / Sequencer Mode



Sampling mode (if the EXB-SMPL option is installed)

Effect / Mixer Block Diagram in Sampling Mode (If the EXB-SMPL option is installed)



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Filter / Dynamic

Filter and dynamics control effects

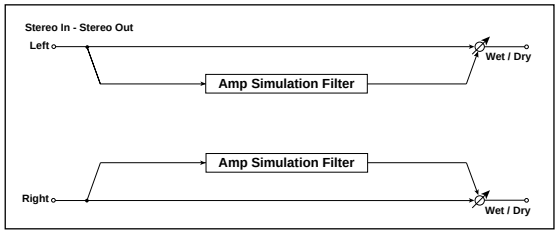
00: No Effect

Select this option when you do not wish to use any effects. The Insert Effect section outputs unprocessed signals and the Master Effect section mutes the output.

01: St.Amp Sim

(Stereo Amp Simulation)

This effect simulates the frequency response characteristics of guitar amplifiers. It is also effective for organ and drum sounds.

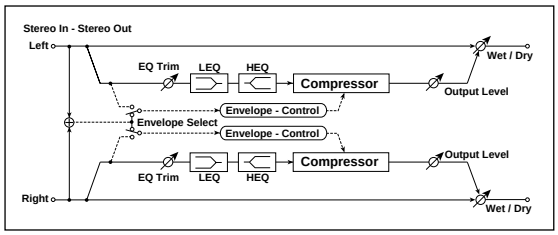


a	Amplifier Type Select between three types of guitar amp simulators	SS, EL84, 6L6
b	W/D (Wet/Dry) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

02: St.Compressor

(Stereo Compressor)

This effect compresses the input signal to regulate the level and give a “punchy” effect. It is useful for guitar, piano, and drum sounds. This is a stereo compressor. You can link left and right channels, or use each channel separately.



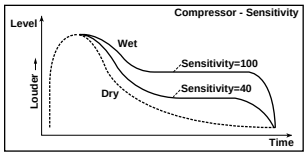
a	Envelope (Envelope Select) Determines whether the left and right channels are linked or used separately ☞	L/R Mix, L/R Individually
b	Sensitivity Sets the sensitivity ☞	1...100
c	Attack Sets the attack level ☞	1...100
d	Level (Output Level) Sets the output level of the compressor ☞, D-mod	0...100
	(Source) Selects the modulation source for the compressor output level	Off...Tempo
	(Amount) Sets the modulation amount of the compressor output level	–100...+100
e	Pre EQ Trim Sets the EQ input level	0...100
f	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15.0...+15.0dB
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds D-mod	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Envelope

This parameter selects whether the left and right channels are linked to control both signals simultaneously, or whether each channel is controlled independently.

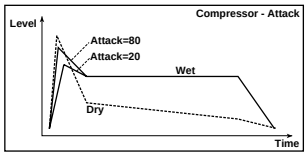
b: Sensitivity, d: Level

The “Sensitivity” parameter sets the sensitivity of the compressor. If this parameter is set to a higher value, lower level sounds will be boosted. With a higher Sensitivity, the overall volume level is higher. To adjust the final volume level, use the “Level” parameter.



c: Attack

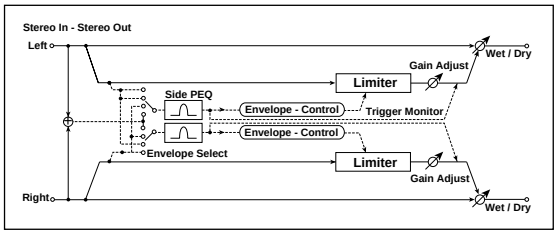
This parameter controls the attack level.



03: St.Limiter

(Stereo Limiter)

The Limiter regulates the input signal level. It is similar to the Compressor, except that the Limiter compresses only signals that exceed the specified level to lower unnecessary peak signals. The Limiter applies a peaking-type EQ to the trigger signal (which controls the degree of the Limiter effect), allowing you to set any band width to be covered. This effect is a stereo limiter. You can link left and right channels, or use each channel individually.



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a	Envelope (Envelope Select) L/R Mix, L Only, R Only, L/R Individually Selects from linking both channels, controlling only from left channel, only from the right channel, or controlling each channel individually ☞	
b	Ratio Sets the signal compression ratio ☞	1.0:1...50.0:1, Inf:1
c	Threshold Sets the level above which the compressor is applied ☞	–40...0dB
d	Attack Sets the attack time ☞	1...100
e	Release Sets the release time ☞	1...100
f	Side PEQ Insert Toggles between on/off of the trigger signal's EQ ☞	Off, On
g	Trigger Monitor Switches between effect output monitor and trigger signal monitor ☞	Off, On
h	EQ (Side PEQ Cutoff) Sets the EQ center frequency for the trigger signal ☞	20...12.00kHz
	Q Sets the EQ bandwidth for the trigger signal	0.5...10.0
	G (Gain) Sets the EQ gain for the trigger signal	–18.0...+18.0dB
i	G.Adj (Gain Adjust) Sets the output gain ☞, D mod	–Inf, –38...+24dB
	(Source) Selects the modulation source for the output gain	Off...Tempo
	(Amount) Sets the modulation amount of the output gain	–63...+63
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds D mod	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Envelope

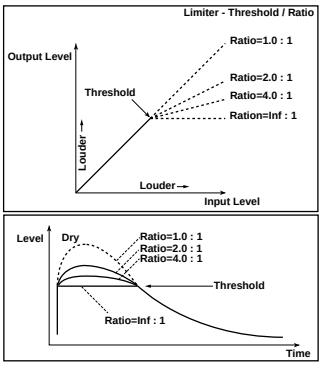
When **L/R Mix** is selected for this parameter, the left and right channels are linked to control the Limiter using the mixed signal. If **L Only** (or **R Only**) is selected, the left and right channels are linked, and the Limiter is controlled via only the left (or right) channel.

With **L/R individually**, the left and right channels control the Limiter individually.

b: Ratio, c: Threshold, i: G.Adj

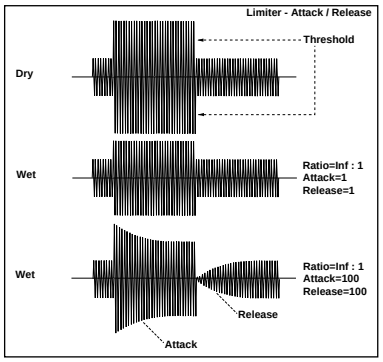
This parameter sets the signal compression "Ratio". Compression is applied only when the signal level exceeds the "Threshold" value.

Adjust the output level using the "G.Adj" parameter, since compression causes the entire level to be reduced.



d: Attack, e: Release

These parameters set the attack time and release time. A higher attack time will cause the compression to be applied more slowly.



f: Side PEQ Insert, h: EQ, h: Q, h: G

These parameters are used to set the EQ applied to the trigger signal.

The Limiter determines whether the compression is applied or not, based on the post-EQ trigger signal. Setting the equalizer allows you to set the Limiter to respond to any frequency band.

g: Trigger Monitor

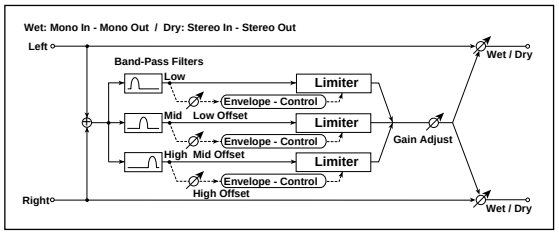
Setting this parameter **On** will cause the trigger signal to be output, instead of the effect sound. Use this parameter to check the trigger signal with EQ applied.

Usually, set this to **Off**.

04: Mltband Limit

(Multiband Limiter)

This effect applies the Limiter to the low range, mid range, and high range of the input signal. You can control dynamics for each range to adjust the sound pressure of the low range, mid range, and high range in a different way from the EQ.



a	Ratio Sets the signal compression ratio ☞ Fx:03	1.0:1...50.0:1, Inf:1
b	Threshold Sets the level above which the compressor is applied ☞ Fx:03	–40...0dB
c	Attack Sets the attack time ☞ Fx:03	1...100
d	Release Sets the release time ☞ Fx:03	1...100
e	Low Offset Gain of the low-range trigger signal ☞	–40...0dB
f	Mid Offset Gain of the mid-range trigger signal ☞	–40...0dB
g	High Offset Gain of the high-range trigger signal ☞	–40...0dB
h	G.Adj (Gain Adjust) Sets the output gain ☞ Fx:03, D mod	–Inf, –38...+24dB
	(Source) Selects the modulation source for the output gain	Off...Tempo
	(Amount) Sets the modulation amount of the output gain	–63...+63

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i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

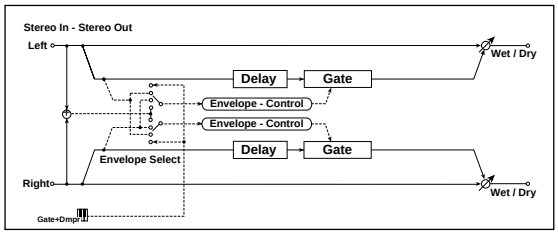
e: Low Offset, f: Mid Offset, g: High Offset

These parameters set the gain of the trigger signal.
For example, if you do not want to apply compression to the high range, reduce the "High Offset" value down below the "Threshold" level. In this way, the high range limiter will not respond, and compression will not be applied.

05: St.Gate

(Stereo Gate)

This effect mutes the input signal if its level is lower than the specified level. It also reverses the on and off operation of the gate, and uses Note On and Off messages to turn the gate on and off.



a	Envelope (Envelope Select) Selects from Control via the modulation source, mixing the left and right signals, Only left, and Only right	Dmod, L/R Mix, L Only, R Only ☞, D-mod
b	Env. Dmod Src (Envelope Dmod Source) Selects the modulation source that controls the gate when Envelope = Dmod	Off...G2+Dmp
c	Threshold Sets the level to which the Gate is applied	0...100 ☞
d	Attack Sets the attack time	1...100 ☞
e	Release Sets the release time	1...100 ☞
f	Polarity Switches between non-reversed and reversed Gate on/off	+, – ☞
g	Delay (Delay Time) Sets the delay time of the gate input	0...100ms ☞
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Envelope, b: Env. Dmod Src

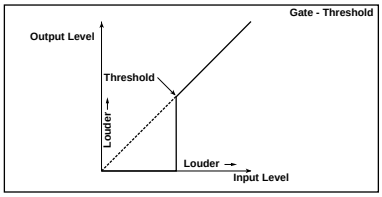
The "Envelope" parameter selects whether the gate on / off is triggered by the level of the input signal, or controlled directly by the modulation source. The Src parameter specifies the modulation source, selected from **Off** to **G2+Dmod**.
With "Envelope" = **L/R Mix**, the left and right channel signal mixture will trigger the gate on / off. When **L Only** or **R Only** is selected, the gate is controlled by either of the channel signals.

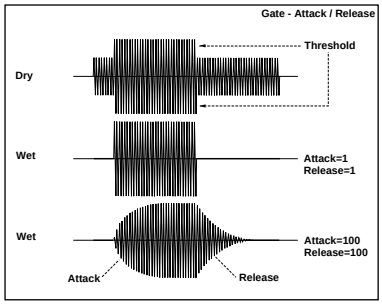
f: Polarity

This parameter reverses the Gate on / off operation. With a **negative** value, the gate is closed when the input signal level exceeds the Threshold. The gate operation controlled by the modulation source is also reversed.

c: Threshold, d: Attack, e: Release

This parameter sets the signal level below which Gate is applied when "Envelope" is set to **L/R Mix**, **L Only**, or **R Only**.
The Attack and Release parameters set the Gate attack time and release time.





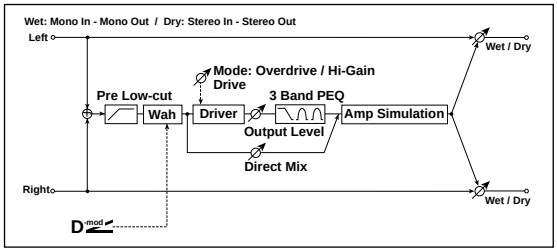
g: Delay

This parameter sets the delay time of the Gate input. If the sound has a very fast attack, increase the delay time so that the signal will be input after the Gate is opened. This will preserve the attack part of the sound.

06: OD / HiGain Wah

(Overdrive / Hi.Gain Wah)

This distortion effect utilizes an Overdrive mode and a Hi-Gain mode. Controlling the wah effect, the 3-band EQ, and the amp simulation will allow you to create versatile distortion sounds. This effect is suitable for guitar and organ sounds.



a	Wah Switches Wah on/off	Off, On ☞, D-mod
	(Source) Selects the modulation source that switches the Wah on and off	Off...Tempo
	(Sw) Selects the switching mode for the modulation source that switches the Wah on and off	Tggl, Mmnt ☞
b	Sweep Rng (Wah Sweep Range) Sets the range of Wah	–10...+10 ☞, D-mod
	Src (Source) Selects the modulation source that controls the Wah	Off...Tempo ☞
c	Mode (Drive Mode) Switches between overdrive and hi-gain distortion	Overdrive, Hi-Gain
	Drive Sets the degree of distortion	1...100 ☞
d	Pre Low-cut Sets the low range cut amount of the distortion input	0...10 ☞

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e	Level (Output Level) Sets the output level	0...50 ☞, D mod
	(Source) Selects the modulation source for the output level	Off...Tempo
	(Amount) Sets the modulation amount of the output level	–50...+50
f	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.0kHz
	G (Gain) Sets the gain of Low EQ	–18...+18dB
g	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 ☞
	G (Gain) Sets the gain of Mid/High EQ 1	–18...+18dB
h	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 ☞
	G (Gain) Sets the gain of Mid/High EQ 2	–18...+18dB
i	Direct Mix Sets the amount of the dry sound mixed to the distortion	0...50
	SpSim (Speaker Simulation) Switches the speaker simulation on/off	Off, On
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Wah

The Wah parameter switches the wah effect on / off.

a: (Sw)

This parameter sets how the wah effect is switched on and off via the modulation source.

When "Sw" = **Mmnt (Moment)**, the wah effect is usually turned off. It is turned on only when you press the pedal or operate the joystick.

MIDI When a value for the modulation source is less than 64, "off" speed is selected, and when the value is 64 or higher, "on" is selected.

When "(Sw)" = **Tggl (Toggle)**, the wah effect is switched between on and off each time you press the pedal or operate the joystick.

MIDI The switch will be turned on / off each time the value of the modulation source exceeds 64.

b: SweepRng, b: Src

This parameter sets the sweep range of the wah center frequency. A negative value will reverse the direction of sweep. The wah center frequency can be controlled by the modulation source specified in the "Src" parameter.

d: Drive, e: Level

The degree of distortion is determined by the level of input signal and the setting of "Drive". Raising the "Drive" setting will cause the entire volume level to increase. Use the "Level" parameter to adjust the volume level. The "Level" parameter uses the signal level input to the 3-Band EQ. If clipping occurs at the 3-Band EQ, adjust the "Level" parameter.

d: Pre Low-cut

Cutting the signal in the low range before it is input to the Distortion will create a sharp distortion.

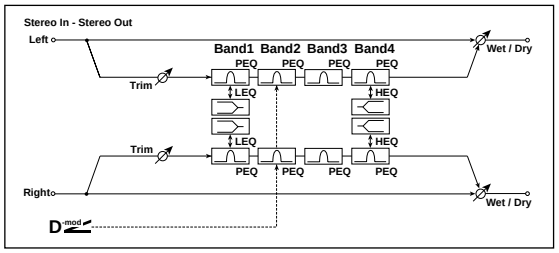
g: Q, h: Q

These parameters set the bandwidth of each equalizer. The higher the value, the narrower the band becomes.

07: St.Para.4EQ

(Stereo Parametric 4-Band EQ)

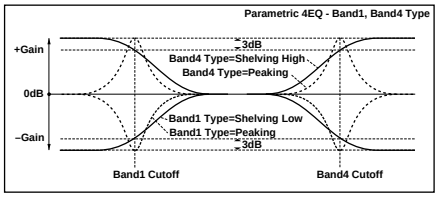
This is a stereo 4-band parametric equalizer. You can select peaking type or shelving type for Band 1 and 4. The gain of Band 2 can be controlled by dynamic modulation.



a	Trim Sets the input level	0...100
b	B1 Type (Band1 Type) Selects the type of Band 1	Peaking, Shelving-Low ☞
c	B4 Type (Band4 Type) Selects the type of Band 4	Peaking, Shelving-High ☞
d	B2 Dyn.G Src (Band2 Dynamic Gain Source) Selects the modulation source of the Band 2 gain	Off...Tempo ☞
	(Amount) Sets the modulation amount of Band 2 gain	–18...+18dB ☞
e	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18.0...+18.0dB
f	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...10.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18.0...+18.0dB ☞, D mod
g	B3 (Band3 Cutoff) Sets the center frequency of Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18.0...+18.0dB
h	B4 (Band4 Cutoff) Sets the center frequency of Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18.0...+18.0dB
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

b: B1 Type, c: B4 Type

Selects a filter type for Band 1 and 4.



Effect

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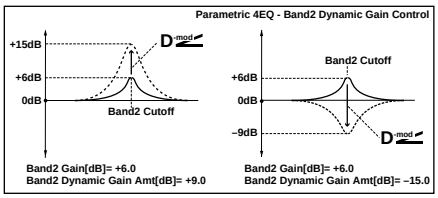
d: B2 Dyn.G Src, d: (Amount), f: G

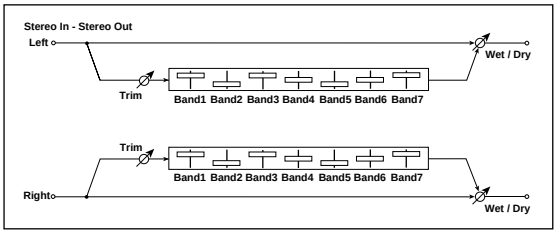
You can control the gain of Band 2 using the modulation source.



08: St.Graphic7EQ

(Stereo Graphic 7-Band EQ)

This is a stereo 7-band graphic equalizer. The bar graph of the gain setting for each band gives you a clear, visual idea of frequency responses. You can select a center frequency setting for each band from twelve types, according to the sound.



a	Type 1:Wide 1, 2:Wide 2, 3:Wide 3, 4:Half Wide 1, 5:Half Wide 2, 6:Half Wide 3, 7:Low, 8:Wide Low, 9:Mid, 10:Wide Mid, 11:High, 12:Wide High Selects a combination of center frequencies for each band ☞	
b	Trim Sets the input level	0...100
c	(Band1) Sets the gain of Band 1	–18.0...+18.0dB
d	(Band2) Sets the gain of Band 2	–18.0...+18.0dB
e	(Band3) Sets the gain of Band 3	–18.0...+18.0dB
f	(Band4) Sets the gain of Band 4	–18.0...+18.0dB
g	(Band5) Sets the gain of Band 5	–18.0...+18.0dB
h	(Band6) Sets the gain of Band 6	–18.0...+18.0dB
i	(Band7) Sets the gain of Band 7	–18.0...+18.0dB
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds D-mod	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

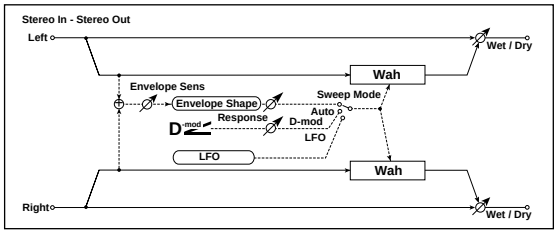
a: Type

This parameter selects a combination of center frequencies for each band. Select a combination of center frequencies for each band. The center frequency of each band is shown at the top of the LCD screen.

09: St.Wah / AutoW

(Stereo Wah / Auto Wah)

This stereo wah effect allows you to create sounds from vintage wah pedal simulation to auto-wah simulation, and much broader range settings.



a	FreqBottm (Frequency Bottom) Sets the lower limit of the wah center frequency ☞	0...100
	FreqTop (Frequency Top) Sets the upper limit of the wah center frequency ☞	0...100
b	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO ☞, D-mod	Auto, Dmod, LFO
	Src (Source) Selects the modulation source for the wah when Swp Mode=Dmod	Off...Tempo
c	Response Sets the response speed when Swp Mode = Auto or Dmod	0...100
d	Envelope Sens (Envelope Sensitivity) Sets the sensitivity of auto-wah ☞	0...100
e	Envelope Shape Sets the sweep curve of auto-wah ☞	–100...+100
f	lfoF (LFO Frequency) Sets the LFO speed ☞, D-mod	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
g	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes ☞, Sync	Off, On
	BPM Selects MIDI Clock and assigns tempo ☞	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed ☞	𝅘𝅥𝅯, 𝅘𝅥𝅯₃, 𝅘𝅥𝅮, 𝅘𝅥𝅮₃, 𝅘𝅥, 𝅗𝅥₃, 𝅗𝅥, 𝅝
	Times Sets the number of notes that specify the LFO speed ☞	x1...x16
h	Resonance Sets the resonance amount	0...100
	LPF (Low Pass Filter) Switches the Wah Low Pass Filter on and off	Off, On
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds D-mod	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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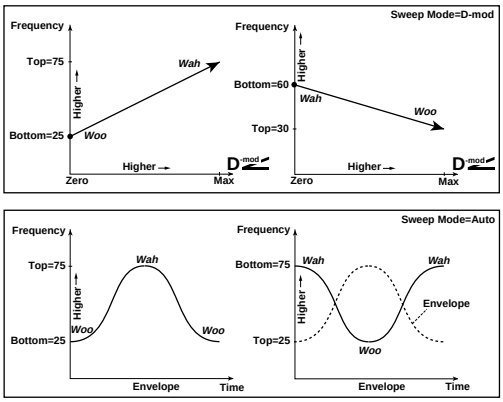
a: FreqBottm, a: FreqTop

The sweep width and direction of the wah filter are determined by the "FreqBottm" and "FreqTop" settings.



b: Swp Mode

This parameter changes the wah control mode. Setting "Swp Mode" to **Auto** will select an auto-wah that sweeps according to envelope changes in the input signal level. Auto-wah is frequently used for funk guitar parts and clav sounds.

When "Swp Mode" is set to **Dmod**, you can control the filter directly via the modulation source in the same way as a wah pedal.

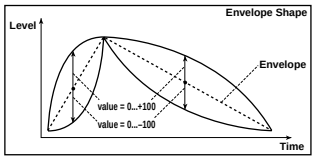
When "Swp Mode" is set to **LFO**, the effect uses LFO to sweep in cycle.

d: Envelope Sens

This parameter sets the sensitivity of auto-wah. Increase the value if the input signal is too low to sweep. Reduce the value if the input signal is so high that the filter is stopped temporarily.

e: Envelope Shape

This parameter determines the sweep curve for auto-wah.



f: lfoF, g: BPM/MIDI Sync

When "BPM / MIDI Sync"=**Off**, the LFO speed uses the lfoF parameter setting. When "BPM / MIDI Sync"=**On**, the LFO speed follows the "BPM", "Base", and "Times" settings.

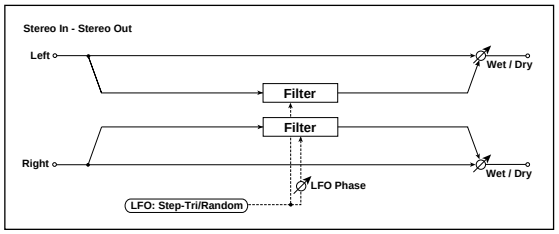
g: BPM, g: Base, g: Times

One cycle of LFO sweep is obtained by multiplying the length of a note (𝅘𝅥𝅯…𝅝) (selected for "Base", in relation to the tempo specified in ("BPM", or the MIDI Clock tempo if "BPM" is set to **MIDI**) by the number specified in the Times parameter.

10: St.Rndm Filter

(Stereo Random Filter)

This stereo band pass filter uses a step-shape waveform and random LFO for modulation. You can create a special effect from filter oscillation.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Step-Tri, Random ☞
b	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞, Dmod
	(Source) Selects the modulation source used for both LFO speed and step speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	Step (LFO Step Frequency) Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz ☞, Dmod
	(Amount) Sets the modulation amount of LFO step speed	–50.00...+50.00Hz
e	Manual Sets the filter center frequency	0...100
	Resonance Sets the resonance amount	0...100
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09, ☞
	Base (Base Note) Selects the type of notes that specify the LFO speed	𝅘𝅥𝅯, 𝅘𝅥𝅯𝅝, 𝅘𝅥𝅯, 𝅘𝅥, 𝅘𝅥𝅝, 𝅗𝅥, 𝅗𝅥𝅝 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	x1...x16 ☞ Fx:09
g	StepBase (Step Base Note) Selects the type of notes to specify the LFO step speed	𝅘𝅥𝅰, 𝅘𝅥𝅯𝅝, 𝅘𝅥𝅯, 𝅘𝅥𝅯𝅝, 𝅘𝅥𝅯, 𝅘𝅥, 𝅘𝅥𝅝, 𝅗𝅥, 𝅗𝅥𝅝 ☞, Sync
	Times Sets the number of notes to specify the LFO step speed	x1...x32 ☞
h	Depth Sets the modulation depth of filter center frequency	0...100
	(Source) Selects the modulation source of filter modulation	Off...Tempo
	(Amount) Sets the modulation amount of filter modulation	–100...+100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞, Dmod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: LFO Wave, c: Freq, d: Step

When "LFO Wave" is set to **Step-Tri**, LFO is a step-shape, triangle waveform. The "Freq" parameter sets the original triangle waveform speed. Changing the "Step" parameter enables you to adjust the width of the steps.

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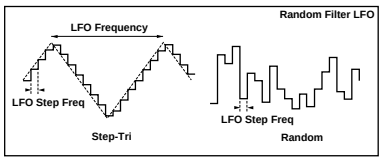
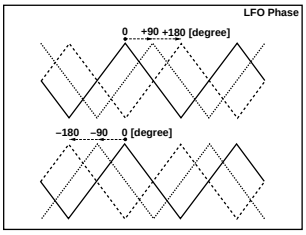
When “LFO Wave” is set to **Random**, the “Step” parameter uses a random LFO cycle.



b: LFO Phase

Offsetting the left and right phases alters how modulation is applied to the left and right channels, creating a swelling affect.



f: BPM, g: StepBase, g: Times

The width of an LFO step, or a cycle of random LFO, is obtained by multiplying the length of a note (𝅘𝅥𝅯…𝅝) (selected for “StepBase”, in relation to the tempo specified in “BPM,” or the **MIDI** Clock tempo if “BPM” is set to MIDI) by the number specified in the “Times” parameter.

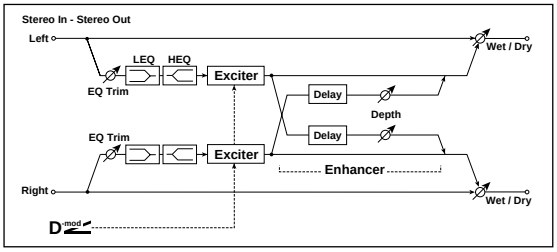
j: W/D

The effect sound’s phase will be reversed when you set this parameter in the range of values from **–Wet to –1:99**.

11: St.Exct/Enhcr

(Stereo Exciter/Enhancer)

This effect is a combination of the Exciter, which adds a punch to the sound and the Enhancer, which adds spread and presence.



a	Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	–100...+100 ☞, D-mod
	(Source) Selects the modulation source of the Exciter intensity	Off...Tempo
	(Amount) Sets the modulation amount of the Exciter intensity	–100...+100
b	Point (Emphatic Point) Sets the frequency to be emphasized	0...70 ☞, D-mod
	(Source) Selects the modulation source of the frequency to be emphasized	Off...Tempo
	(Amount) Sets the amount of modulation of the frequency to be emphasized	–70...+70
c	Enh Dly L (Enhancer Delay L) Sets the delay time for the Enhancer left channel	0.0...50.0ms ☞
d	Enh Dly R (Enhancer Delay R) [msec] Sets the delay time for the Enhancer right channel	0.0...50.0ms ☞
e	Enh Dep (Enhancer Depth) Sets the determines to what degree the Enhancer effect is applied	0...100 D-mod
	(Source) Selects the modulation source of the Enhancer width	Off...Tempo
	(Amount) Sets the modulation amount of the Enhancer width	–100...+100
f	Pre EQ Trim Sets the EQ input level	0...100
g	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15.0...+15.0dB
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Blend

This parameter sets the depth (intensity) of the Exciter effect. Positive values give a frequency pattern (to be emphasized) different from negative values.

b: Point

This parameter sets the frequency to be emphasized. Higher values will emphasize lower frequencies.

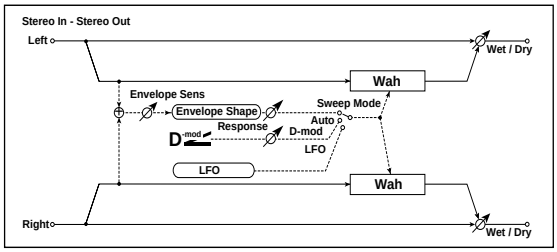
c: Enh Dly L, d: Enh Dly R

These parameters set the delay time for the Enhancer left and right channel. Specifying a slightly different delay time for the left and right channel will add a stereo image, depth, and width to the sound.

12: St.Sub OSC

(Stereo Sub Oscillator)

This effect adds very low frequencies to the input signal. It is very useful when simulating a roaring drum sound or emphasizing powerful low range. This effect is different from the equalizer in that you can add very low range harmonics. You can also adjust the oscillator frequency to match a particular note number, for use as an octaver.



a	OSC Mode Determines whether the oscillator frequency follows the note number or whether it is fixed	Note (Key Follow), Fixed ☞
b	Note Interval Sets the pitch difference from the note number when OSC Mode=Note (Key Follow)	–48...0 ☞
c	Fine (Note Fine) Fine adjustment of the oscillator frequency	–100...+100 ☞
d	Fixed (Fixed Frequency) Sets the oscillator frequency when OSC Mode=Fixed	10.0...80.0Hz D-mod
	(Source) Selects the modulation source for the oscillator frequency when OSC Mode=Fixed	Off...Tempo
	(Amount) Sets the oscillator frequency modulation amount when OSC Mode=Fixed	–80...+80Hz

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e	Envelope Pre LPF Sets the upper limit of the frequency range for which very low harmonics are added	1...100 ☞
f	Envelope Sens (Envelope Sensitivity) Sets the sensitivity with which very low harmonics are added	0...100
g	Envelope Shape Sets the oscillator's volume envelope curve	–100...+100
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: OSC Mode, b: Note Interval, c: Fine

The "OSC Mode" parameter selects the oscillator operation mode. When **Note (Key Follow)** is selected, the oscillator's frequency is determined based on the note number, allowing you to use it as an octaver. The "Note Interval" parameter sets the pitch offset from the original note number by semitone steps. The "Fine" parameter allows you to fine-tune in steps of cents.

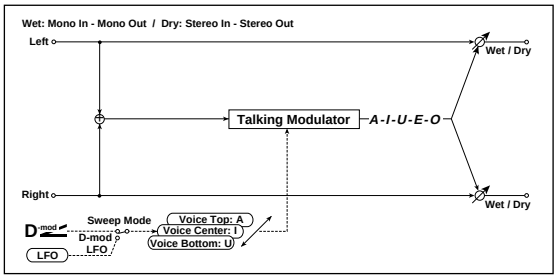
e: Envelope Pre LPF

This parameter sets the upper limit of the frequency range to which very low harmonics are added. Adjust this parameter if you do not want to add lower harmonics to the higher range.

13: Talking Mod

(Talking Modulator)

This effect adds an unusual character, like a human voice, to the input signal. Modulating the tone via dynamic modulation, you can create an interesting effect that sounds as if the guitar or synthesizer is talking.

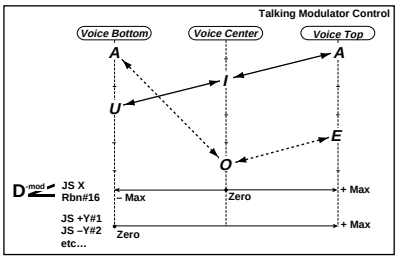


a	Sweep Mode Switches between modulation source control and LFO control	Dmod, LFO D-mod
b	Voice Control Voice pattern control	Bottom, 1...49, Center, 51...99, Top
c	Control Src (Control Source) Selects the modulation source that controls the voice pattern	Off...Tempo
d	Top (Voice Top) Selects a vowel sound at the top end of control	A, I, U, E, O ☞
	Center (Voice Center) Selects a vowel sound in the center of control	A, I, U, E, O ☞
	Bottom (Voice Bottom) Selects a vowel sound at the bottom end of control	A, I, U, E, O ☞
e	Formant Shift Sets the frequency to which the effect is applied	–100...+100 ☞
f	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:09, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz

g	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Base (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪3, ♪., ♩3, ♩., ♩3, 𝅗𝅥, 𝅗𝅥3, 𝅗𝅥., 𝅝 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
h	Resonance Sets the Level of resonance of the voice pattern	0...100 ☞
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

d: Top, d: Center, d: Bottom

These parameters assign vowels to the top, center, and bottom position of the controller.
E.g.: When "Top"=**A**, "Center"=**I**, and "Bottom"=**U**:
If "Sweep Mode" is set to **Dmod** and "Control Src" is set to **JSX**, moving the joystick from the far right to the far left will make the voice change from "a" to "i" then "u."
If Sweep Mode is set to **LFO**, the sound will change cyclically from "a" to "i," "u," "i," then "a."



e: Formant Shift

This parameter adjusts the frequency level to which the effect is applied. If you wish to apply the effect to a higher-range sound, set this parameter to a higher value; to apply the effect to a lower-range sound, set this to a lower value.

h: Resonance

This parameter sets the intensity of resonance for the voice pattern. A larger value will add more character to the sound.

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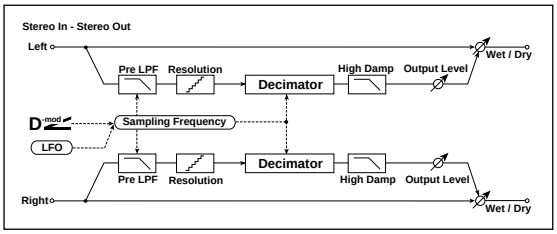
14: St.Decimator

(Stereo Decimator)

This effect creates a rough sound like a cheap sampler by lowering the sampling frequency and data bit length. You can also simulate noise unique to a sampler (aliasing).



a	Pre LPF Selects whether the harmonic noise caused by a decrease in sampling frequency is generated or not ☞	Off, On
b	High Damp Sets the ratio of cut of the high range	0...100%
c	Fs (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz D-mod
	(Source) Selects the modulation source of the sampling frequency	Off...Tempo
	(Amount) Sets the modulation amount of the sampling frequency	–48.00k...+48.00kHz
d	Resolution Sets the data bit length ☞	4...24
e	Level (Output Level) Sets the output level ☞, D-mod	0...100
	(Source) Selects the modulation source for the output level	Off...Tempo
	(Amount) Sets the modulation amount of the output level	–100...+100
f	IfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
g	Depth Sets the depth of the sampling frequency LFO modulation	0...100 D-mod
	(Source) Selects the LFO modulation source of the sampling frequency	Off...Tempo
	(Amount) Sets the LFO modulation amount of the sampling frequency	–100...+100
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Pre LPF

If a sampler with a very low sampling frequency receives very high-pitched sound that could not be heard during playback, it could generate pitch noise that is unrelated to the original sound. Set “Pre LPF” to **ON** to prevent this noise from being generated. If you set the “Fs” to about **3kHz** and set “Pre LPF” to **OFF**, you can create a sound like a ring modulator.

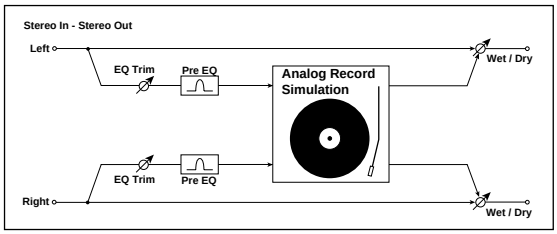
d: Resolution, e: Output Level

If you set a smaller value for the “Resolution” parameter, the sound may be distorted. The volume level may also be changed. Use “Level” to adjust the level.

15: St.AnalogRecd

(Stereo Analog Record)

This effect simulates the noise caused by scratches and dust on analog records. It also reproduces some of the modulation caused by a warped turntable.



a	Speed Sets the r.p.m. of a record	33 1/3, 45, 78RPM
b	Flutter Sets the modulation depth ☞	0...100
c	Pre EQ Trim Sets the EQ input level	0...100
d	EQ (Pre EQ Cutoff) Sets the EQ center frequency	300...10.00kHz
	Q Sets the EQ band width	0.5...10.0
	G (Gain) Sets the EQ gain	–18.0...+18.0dB
e	Noise Density Sets the noise density	0...100
f	Noise Tone Sets the noise tone	0...100
g	NoiseLvl (Noise Level) Sets the noise level D-mod	0...100
	(Source) Selects the modulation source for the noise level	Off...Tempo
	(Amount) Sets the modulation amount of the noise level	–100...+100
h	ClickLvl (Click Level) Sets the click noise level ☞, D-mod	0...100
	(Source) Selects the modulation source for the click noise level	Off...Tempo
	(Amount) Sets the modulation amount of the click noise level	–100...+100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds D-mod	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

b: Flutter

This parameter enables you to set the depth of the modulation caused by a warped turntable.

h: ClickLvl

This parameter enables you to set the level of the click noise that occurs once every rotation of the turntable. This simulation reproduces record noise, and the noise generated after the music on a vinyl record finishes.

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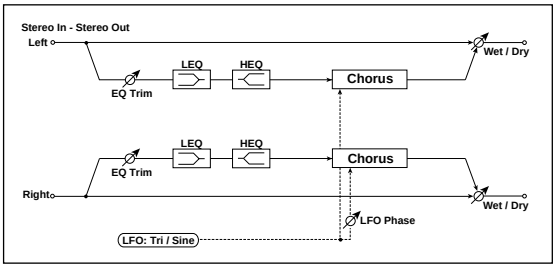
Pitch / Phase Mod.

Pitch / phase modulation effects

16: St.Chorus

(Stereo Chorus)

This effect adds thickness and warmth to the sound by modulating the delay time of the input signal. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine
b	LFO Phase Sets the LFO phase difference between the left and right ☞ Fx:10	–180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed ☞ Fx:09, D-mod	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes ☞ Fx:09, Sync	Off, On
	BPM Selects MIDI Clock and assigns tempo ☞ Fx:09	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed ☞ Fx:09	♪, ♪3, ♪., ♩3, ♩., 𝅗𝅥3, 𝅗𝅥., 𝅝
	Times Sets the number of notes that specify the LFO speed ☞ Fx:09	1...16
e	L Dly (L Pre Delay) Sets the delay time for the left channel ☞	0.0...50.0ms
	R Dly (R Pre Delay) Sets the delay time for the right channel ☞	0.0...50.0ms
f	Depth Sets the depth of LFO modulation D-mod	0...100
	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	–100...+100
g	Pre EQ Trim Sets the EQ input level	0...100
h	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15.0...+15.0dB
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds ☞ Fx:10, D-mod	–Wet...–1:99, Dry, 1:99...Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

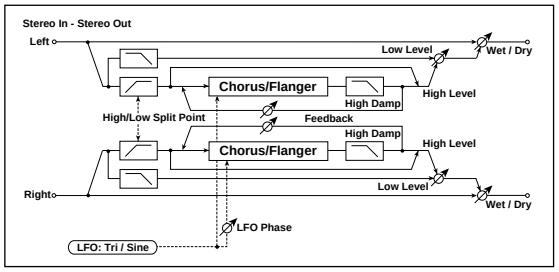
e: L Dly, e: R Dly

Setting the left and right delay time individually allows you to control the stereo image.

17: St.HarmnicCho

(Stereo Harmonic Chorus)

This effect applies chorus only to higher frequencies. This can be used to apply a chorus effect to a bass sound without making the sound thinner. You can also use this chorus block with feedback as a flanger.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine
b	LFO Phase Sets the LFO phase difference between the left and right ☞ Fx:10	–180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed ☞ Fx:09, D-mod	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes ☞ Fx:09, Sync	Off, On
	BPM Selects MIDI Clock and assigns tempo ☞ Fx:09	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed ☞ Fx:09	♪, ♪3, ♪., ♩3, ♩., 𝅗𝅥3, 𝅗𝅥., 𝅝
	Times Sets the number of notes that specify the LFO speed ☞ Fx:09	1...16
e	Dly (Delay Time) Sets the delay time from the original sound	0.0...50.0ms
	Hi/Lo Split (High/Low Split Point) Sets the frequency split point between the high and low range ☞	1...100
f	Depth Sets the depth of LFO modulation D-mod	0...100
	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	–100...+100
g	Feedback Sets the feed back amount of the chorus block ☞	–100...+100
	HiDamp (High Damp) Sets the high range damping amount of the chorus block	0...100%
h	Lo Level (Low Level) Sets the low range output level	0...100
	Hi Level (High Level) Sets the high range (chorus) output level	0...100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds D-mod	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

e: Hi/Lo Split

This parameter sets the frequency that splits the high and low range. Only the high range will be sent to the chorus block.

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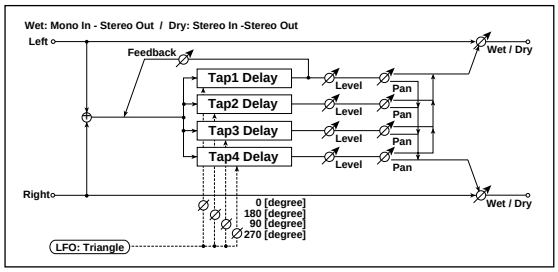
g: Feedback

Sets the feedback amount of the chorus block. Increasing the feedback will allow you to use the effect as a flanger.

18: MltTap ChoDly

(Multitap Chorus / Delay)

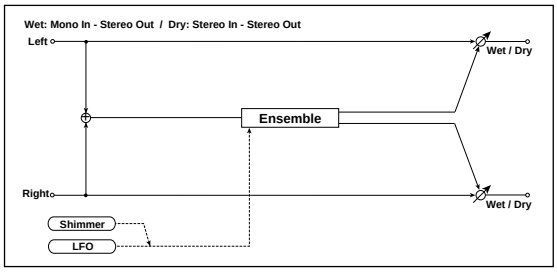
This effect has four chorus blocks with a different LFO phase. You can create a complex stereo image by setting each block's delay time, depth, output level, and pan individually. You can also fix some of the chorus blocks to combine the chorus and delay effects.



a	LFO Freq (LFO Frequency) Sets the LFO speed	0.02...13.00Hz
b	T1(000) (Tap1 Delay) Sets the Tap1 (LFO phase=0 degrees) delay time	0...570ms
	D (Depth) Sets the Tap1 chorus depth	0...30
	L (Level) Sets the Tap1 output level	0...30
	P (Pan) Sets the Tap1 stereo image	L6...L1, C, R1...R6
c	T2(180) (Tap2 Delay) Sets the Tap2 (LFO phase=180 degrees) delay time	0...570ms
	D (Depth) Sets the Tap2 chorus depth	0...30
	L (Level) Sets the Tap2 output level	0...30
	P (Pan) Sets the Tap2 stereo image	L6...L1, C, R1...R6
d	T3(090) (Tap3 Delay) Sets the Tap3 (LFO phase=90 degrees) delay time	0…570ms
	D (Depth) Sets the Tap3 chorus depth	0...30
	L (Level) Sets the Tap3 output level	0...30
	P (Pan) Sets the Tap3 stereo image	L6...L1, C, R1...R6
e	T4(270) (Tap4 Delay) Sets the Tap4 (LFO phase=270 degrees) delay time	0...570ms
	D (Depth) Sets the Tap4 chorus depth	0...30
	L (Level) Sets the Tap4 output level	0...30
	P (Pan) Sets the Tap4 stereo image	L6...L1, C, R1...R6
f	T1 Fb (Tap1 Feedback) Sets the Tap1 feedback amount	–100...+100 D-mod
	(Source) Selects the modulation source of Tap1 feedback amount and effect balance	Off...Tempo
	(Amount) Sets the Tap1 feedback amount and modulation amount	–100...+100
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Amount) Sets the modulation amount of the effect balance	–100...+100

19: Ensemble

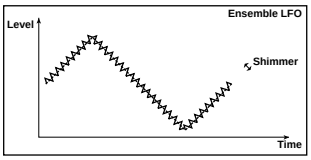
This Ensemble effect has three chorus blocks that use LFO to create subtle shimmering, and gives three dimensional depth and spread to the sound, because the signal is output from the left, right, and center.



a	Speed Sets the LFO speed	1...100 D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–100...+100
b	Depth Sets the depth of LFO modulation	0...100 D-mod
	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	–100...+100
c	Shimmer Sets the amount of shimmering of the LFO waveform	0...100 ☞
d	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

c: Shimmer

This parameter sets the amount of shimmering of the LFO waveform. Increasing this value adds more shimmering, making the chorus effect more complex and richer.



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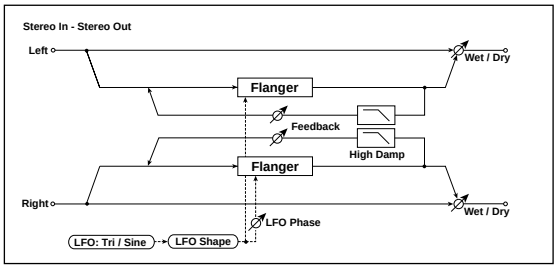
20: St.Flanger

(Stereo Flanger)

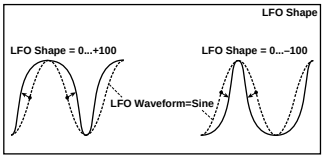
This effect gives a significant swell and movement of pitch to the sound. It is more effective when applied to a sound with a lot of harmonics. This is a stereo flanger. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	–100...+100 ☞
b	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞ Fx:10
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:09, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Base (Base Note) Selects the type of notes that specify the LFO speed	𝅘𝅥𝅯, 𝅘𝅥𝅯𝅷, 𝅘𝅥𝅮, 𝅘𝅥𝅮𝅷, 𝅘𝅥, 𝅗𝅥𝅷, 𝅗𝅥, 𝅝 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
e	Delay (Delay Time) Sets the delay time from the original sound	0.0...50.0ms
f	Depth Sets the depth of LFO modulation	0...100
g	Feedback Sets the feedback amount	–100...+100 ☞
h	High Damp Sets the feedback damping amount in the high range	0...100% ☞
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Shape

Changing the LFO waveform shape controls the peak sweep of flanging effects.



g: Feedback, i: W/D

The peak shape of the positive and negative "Feedback" value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound if you set a positive value for both "Feedback" and "W/D", and if you set a negative value for both "Feedback" and "W/D".

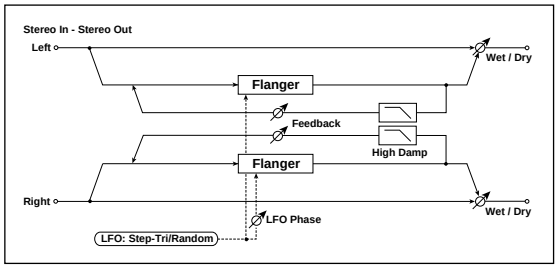
h: High Damp

This parameter sets the amount of damping of the feedback in the high range. Increasing the value will cut high-range harmonics.

21: St.Rndm Flang

(Stereo Random Flanger)

The stereo effect uses a step-shape waveform and random LFO for modulation, creating a unique flanging effect.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Step-Tri, Random ☞ Fx:10
b	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞ Fx:10
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:10, D-mod
	(Source) Selects the modulation source used for both LFO speed and step speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	Step (LFO Step Frequency) Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz ☞ Fx:10, D-mod
	(Amount) Sets the modulation amount of LFO step speed	–50.00...+50.00Hz
e	Delay (Delay Time) Sets the delay time from the original sound	0.0...50.0ms
	Depth Sets the depth of LFO modulation	0...100
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09, 10
	Base (Base Note) Selects the type of notes that specify the LFO speed	𝅘𝅥𝅯, 𝅘𝅥𝅯𝅷, 𝅘𝅥𝅮, 𝅘𝅥𝅮𝅷, 𝅘𝅥, 𝅗𝅥𝅷, 𝅗𝅥, 𝅝 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
g	Step Base (Step Base Note) Selects the type of notes to specify the LFO step speed	𝅘𝅥𝅰, 𝅘𝅥𝅯𝅷, 𝅘𝅥𝅯, 𝅘𝅥𝅮𝅷, 𝅘𝅥𝅮, 𝅘𝅥𝅷, 𝅘𝅥, 𝅗𝅥𝅷, 𝅗𝅥, 𝅝 ☞ Fx:10, Sync
	Times Sets the number of notes to specify the LFO step speed	1...32 ☞ Fx:10
h	Feedback Sets the feedback amount	–100...+100 ☞ Fx:20
	HiDamp (High Damp) Sets the feedback damping amount in the high range	0...100% ☞ Fx:20
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, 20, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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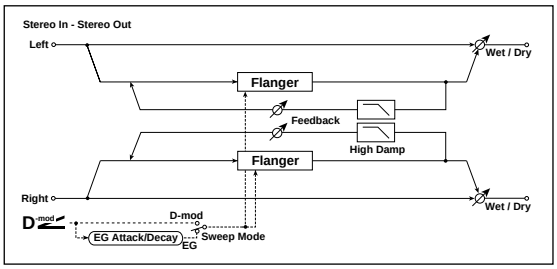
22: St.Env.Flanger

(Stereo Envelope Flanger)

This Flanger uses an envelope generator for modulation. You will obtain the same pattern of flanging each time you play. You can also control the Flanger directly using the modulation source.



a	L Dly Bottom (L Delay Bottom) Sets the lower limit of the delay time on the left channel	0.0...50.0ms ☞ Fx:09
b	L Dly Top (L Delay Top) Sets the upper limit of the delay time on the left channel	0.0...50.0ms ☞ Fx:09
c	R Dly Bottom (R Delay Bottom) Sets the lower limit of the delay time on the right channel	0.0...50.0ms ☞ Fx:09
d	R Dly Top (R Delay Top) Sets the upper limit of the delay time on the right channel	0.0...50.0ms ☞ Fx:09
e	Swp Mode (Sweep Mode) Determines whether the flanger is controlled by the envelope generator or by the modulation source	EG, Dmod ☞, D-mod
	Src (Source) Selects the modulation source that triggers the EG (when EG is selected for Swp Mode), or modulation source that causes the flanger to sweep (when Dmod is selected for Swp Mode)	Off...Tempo ☞
f	EG Attack Sets the EG attack speed	1...100 ☞
g	EG Decay Sets the EG decay speed	1...100 ☞
h	Feedback Sets the feedback amount	–100...+100 ☞ Fx:20
i	High Damp Sets the feedback damping amount in the high range	0...100% ☞ Fx:20
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, 20, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

e: Swp Mode, e: Src

This parameter switches the flanger control mode. With "Swp Mode" = **EG**, the flanger will sweep using the envelope generator. This envelope generator is included in the envelope flanger, and not related to the Pitch EG, Filter EG, or Amp EG.
The "Src" parameter selects the source that starts the envelope generator. If you select, for example, **Gate**, the envelope generator will start when the note-on message is received.
When "Swp Mode" = **Dmod**, the modulation source can control the flanger directly. Select the modulation source using the "Src" parameter.

MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Envelope Generator is triggered when the value changes from 63 or smaller to 64 or higher.

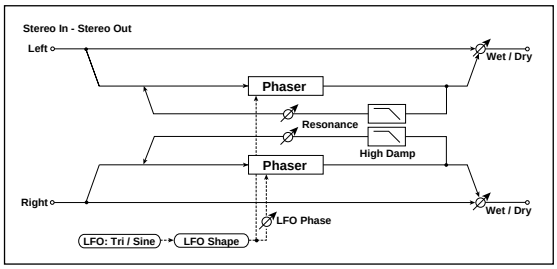
f: EG Attack, g: EG Decay

Attack and Decay speed are the only adjustable parameters on this EG.

23: St.Phaser

(Stereo Phaser)

This effect creates a swell by shifting the phase. It is very effective on electric piano sounds. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	–100...+100 ☞ Fx:20
b	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞ Fx:10
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:09, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Base (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪3, ♪., ♩3, ♩, ♩.3, 𝅗𝅥, 𝅗𝅥. ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
e	Manual Sets the frequency to which the effect is applied	0...100
f	Depth Sets the depth of LFO modulation	0...100 D-mod
	(Source) Selects the modulation source for the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	–100...+100
g	Resonance Sets the resonance amount	–100...+100 ☞
h	High Damp [%] Sets the resonance damping amount in the high range	0...100% ☞
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

g: Resonance, i: W/D

The peak shape of the positive and negative Feedback value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound, if you set a positive value for both "Resonance" and "W/D", and if you set a negative value for both "Resonance" and "W/D".

h: High Damp

This parameter sets the amount of damping of the resonance in the high range. Increasing the value will cut high-range harmonics.

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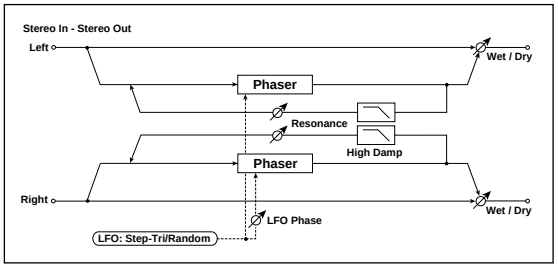
24: St.Rndm Phasr

(Stereo Random Phaser)

This is a stereo phaser. The effect uses a step-shape waveform and random LFO for modulation, creating a unique phasing effect.

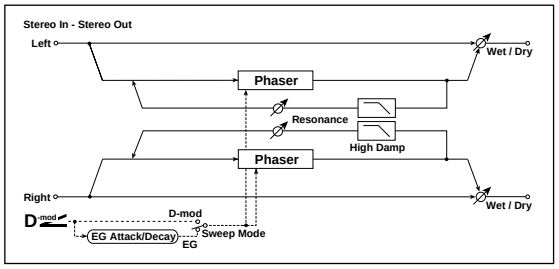


a	LFO Wave (LFO Waveform) Selects LFO Waveform	Step-Tri, Step-Sin, Random ☞ Fx:10
b	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞ Fx:10
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:10, D-mod
	(Source) Selects the modulation source commonly used for LFO speed and step speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	Freq (LFO Step Frequency) Sets the LFO step speed	0.05...50.00Hz ☞ Fx:10, D-mod
	(Amount) Sets the modulation amount of LFO step speed	–50.00...+50.00Hz
e	Manual Sets the frequency to which the effect is applied	0...100
	Depth Sets the depth of LFO modulation	0...100
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:09, 10
	Base (Base Note) Selects the type of notes that specify the LFO speed	𝅘𝅥𝅯, 𝅘𝅥𝅯₃, 𝅘𝅥𝅮, 𝅘𝅥𝅮₃, ♩, ♩₃, 𝅗𝅥, 𝅗𝅥₃, 𝅝 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
g	Step Base (Step Base Note Selects the type of notes to specify the LFO step speed	𝅘𝅥𝅰, 𝅘𝅥𝅰₃, 𝅘𝅥𝅯, 𝅘𝅥𝅯₃, 𝅘𝅥𝅮, 𝅘𝅥𝅮₃, ♩, ♩₃, 𝅗𝅥, 𝅗𝅥₃, 𝅝 ☞ Fx:10, Sync
	Times Sets the number of notes to specify the LFO step speed	1...32 ☞ Fx:10
h	Resonanc (Resonance) Sets the resonance amount	–100...+100 ☞ Fx:23
	HiDamp (High Damp) Sets the resonance damping amount in the high range	0...100% ☞ Fx:23
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, 23, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

25: St.Env.Phaser

(Stereo Envelope Phaser)

This stereo phaser uses an envelope generator for modulation. You will obtain the same pattern of phasing each time you play. You can also control the Phaser directly using the modulation source.



a	L Manu Bottom (L Manual Bottom) Sets the lower limit of the frequency range for the effect on the left channel	0...100 ☞ Fx:09
b	L Manu Top (L Manual Top) Sets the upper limit of the frequency range for the effect on the left channel	0...100 ☞ Fx:09
c	R Manu Bottom (R Manual Bottom) Sets the lower limit of the frequency range for the effect on the right channel	0...100 ☞ Fx:09
d	R Manu Top (R Manual Top) Sets the upper limit of the frequency range for the effect on the right channel	0...100 ☞ Fx:09
e	Swp Mode (Sweep Mode) Determines whether the flanger is controlled by the envelope generator or by the modulation source	EG, Dmod ☞ Fx:22, D-mod
	Src (Source) Selects the modulation source that triggers the EG (when EG is selected for Swp Mode), or modulation source that causes the flanger to sweep (when Dmod is selected for Swp Mode)	Off...Tempo
f	EG Attack Sets the EG attack speed	1...100 ☞ Fx:22
g	EG Decay Sets the EG decay speed	1...100 ☞ Fx:22
h	Resonance Sets the resonance amount	–100...+100 ☞ Fx:23
i	High Damp Sets the resonance damping amount in the high range	0...100% ☞ Fx:23
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, 23, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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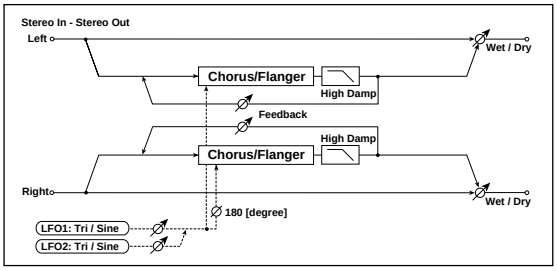
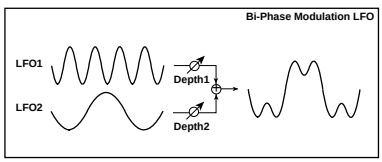
26: St.BiphaseMod

(Stereo Biphase Modulation)

This stereo chorus effect adds two different LFOs together. You can set the Frequency and Depth parameters for each LFO individually. Depending on the setting of these LFOs, very complex waveforms will create an analog-type, unstable modulated sound.



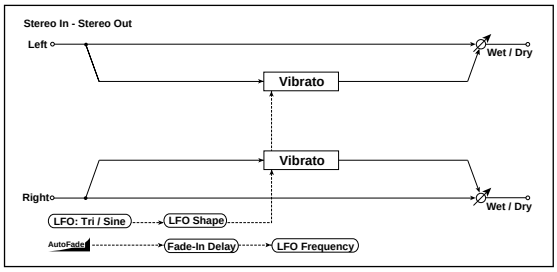
a	LFO1 Wave (LFO1 Waveform) Selects LFO1 waveform	Triangle, Sine
b	LFO2 Wave (LFO2 Waveform) Selects LFO2 waveform	Triangle, Sine
c	LFO Phase Sw Switches the LFO phase difference between left and right	0, 180degree
d	F1 (LFO1 Frequency) Sets the LFO1 speed	0.02...30.00Hz D-mod
	(Source) Selects the modulation source of LFO1&2 speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO1 speed	–30.00...+30.00
e	F2 (LFO2 Frequency) Sets the LFO2 speed	0.02...30.00Hz D-mod
	(Amount) Sets the modulation amount of LFO2 speed	–30.00...+30.00
f	L Dly (L Pre Delay) Sets the delay time for the left channel	0.0...50.0ms ☞ Fx:16
	R Dly (R Pre Delay) Sets the delay time for the right channel	0.0...50.0ms ☞ Fx:16
g	Depth1 Sets the depth of LFO1 modulation	0...100 D-mod
	(Source) Selects the modulation source of LFO1&2 modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of LFO1 modulation depth	–100...+100
h	Depth2 Sets the depth of LFO2 modulation	0...100 D-mod
	(Amount) Sets the modulation amount of LFO2 modulation depth	–100...+100
i	Feedback Sets the feedback amount	–100...+100 ☞ Fx:17
	HiDamp (High Damp) Sets the damping amount in the high range	0...100%
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100



27: St.Vibrato

(Stereo Vibrato)

This effect causes the pitch of the input signal to shimmer. Using the AutoFade allows you to increase or decrease the shimmering speed.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	–100...+100 ☞ Fx:20
b	LFO Freq Mod (LFO Frequency Mod) Switches between Dmod and AUTOFADE for the LFO frequency modulation	Dmod, AUTOFADE ☞
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:09, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Base (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪3, ♪., ♩3, ♩, ♩3, ♩., 𝅗𝅥
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
e	Depth Sets the depth of LFO modulation	0...100 D-mod
	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	–100...+100
f	AUTOFADE Src (AUTOFADE Source) Selects the modulation source that starts AutoFade	Off...Tempo ☞, D-mod
g	Fade Rate (Fade-In Rate) Sets the rate of fade-in	1...100 ☞
	Dly (Fade-In Delay) Sets the fade-in delay time	00...2000ms ☞
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

b: LFO Freq Mod, f: AUTOFADE Src, g: Fade Rate, g: Dly

When "LFO Freq Mod" is set to **AUTOFADE**, you can use the modulation source selected in "AUTO FADE Src" as a trigger to automatically fade in the modulation amount. When "BPM / MIDI Sync" is set to **On**, you cannot use this.
The "Fade Rate" parameter specifies the rate of fade-in. The "Dly" parameter determines the time from AutoFade modulation source ON until the fade-in starts.

The following is an example of fade-in where the LFO speed is increased from "1.0Hz" to "4.0Hz" when a note-on message is received.

"AUTOFADE Src"=**Gate1**, "Freq"=**1.00** Hz

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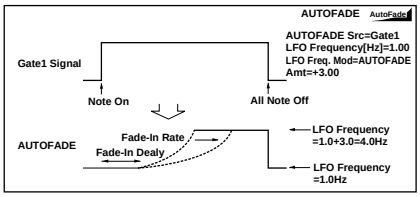
"LFO Freq Mod"=**AUTOFADE**, "(Amount)"=**+3.00**

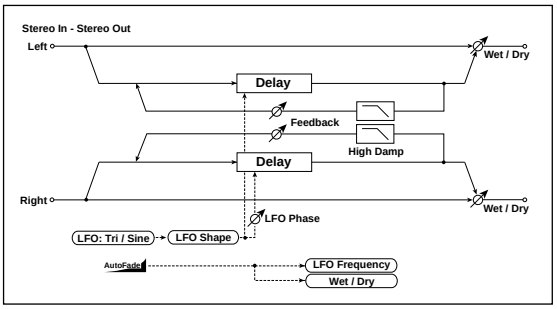
MIDI The effect is off when a value for the dynamic modulation source specified for the "AUTOFADE Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.



28: St.AutoFd Mod

(Stereo Auto Fade Modulation)

This stereo chorus / flanger effect enables you to control the LFO speed and effect balance using auto fade, and you can spread the sound by offsetting the phase of the left and right LFOs from each other.

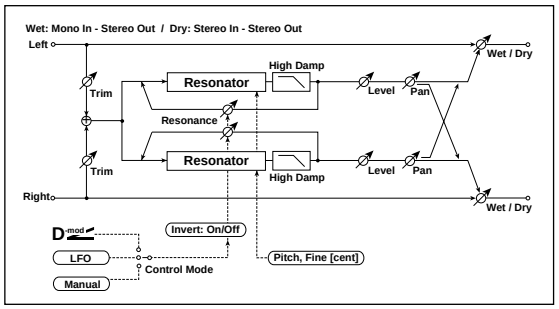


a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed ☞ Fx:20	–100...+100
b	LFO Phase Sets the LFO phase difference between the left and right ☞ Fx:10	–180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed D-mod	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	L Dly (L Pre Delay) Sets the left channel delay time	0.0...500.0ms
	R Dly (R Pre Delay) Sets the right channel delay time	0.0...500.0ms
e	Dep (Depth) Sets the depth of LFO modulation	0...200
	Fb (Feedback) Sets the feedback amount ☞ Fx:20	–100...+100
	HD (High Damp) Sets the feedback damping amount in the high range ☞ Fx:20	0...100%
f	AUTOFADE Src (AUTOFADE Source) Selects the modulation source that starts AutoFade ☞ Fx:27, D-mod	Off...Tempo
g	Fade Rate (Fade-In Rate) Sets the rate of fade-in ☞ Fx:27	1...100
	Dly (Fade-In Delay) Sets the fade-in delay time ☞ Fx:27	00...2000ms
h	Freq Mod (LFO Frequency Mod) Switches between D-mod and AUTOFADE for the LFO frequency modulation ☞ Fx:27	D-mod, AUTOFADE
i	W/D Mod (Wet/Dry Mod) Switches between D-mod and AUTOFADE for the effect balance modulation ☞ Fx:27	D-mod, AUTOFADE
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds ☞ Fx:10, 20, D-mod	–Wet...–1:99, Dry, 1:99...Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

29: 2Voice Reso

(2Voice Resonator)

This effect resonates the input signal at a specified pitch. You can set the pitch, output level, and pan settings for two resonators individually. You can control the resonance intensity via an LFO.



a	Ctrl (Control Mode) Switches the controls of resonance intensity ☞, D-mod	Manual, LFO, Dmod
	Invert (LFO/Dmod Invert) Reverses the Voice 1 and 2 control when LFO/Dmod is selected ☞	Off, On
b	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	Dmod (Dmod Source) Selects the modulation source that controls resonance intensity	Off...Tempo
c	Mod Dep (Mod Depth) Sets the amount of resonance intensity control via LFO/Dmod	–100...+100
	Trim Sets the input level at the resonator	0...100
d	V1 Pitch (Voice1 Pitch) Sets the voice1 Pitch for resonance	C0...B8
	Fine Fine-adjusts the voice 1 pitch for resonance	–50...+50cent
e	V1 Reso (Voice1 Resonance) Sets the intensity of resonance when Control Mode = Manual ☞	–100...+100
	HiDamp (High Damp) Sets the damping amount of resonant sound in the high range ☞	0...100%
f	V1 Level (Voice1 Level) Sets the Voice1 output level	0...100
	Pan Sets the Voice1 stereo image	L6...R6
g	V2 Pitch (Voice2 Pitch) Sets the Voice2 Pitch for resonance	C0...B8
	Fine Fine-adjusts the voice 2 pitch for resonance	–50...+50cent
h	V2 Reso (Voice2 Resonance) Sets the intensity of resonance when Control Mode = Manual ☞	–100...+100
	HiDamp (High Damp) Sets the damping amount of resonant sound in the high range ☞	0...100%
i	V2 Level (Voice2 Level) Sets the Voice2 output level	0...100
	Pan Sets the Voice2 stereo image	L6...R6

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j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Ctrl, e: V1 Reso, h: V2 Reso

This parameter determines the resonance intensity.

When "Ctrl" = **Manual**, the "Reso" parameter sets the intensity of resonance. If the "Reso" parameter has a negative value, harmonics will be changed, and resonance will occur at a pitch one octave lower.

When "Ctrl" = **LFO**, the intensity of resonance varies according to the LFO. The LFO sways between positive and negative values, causing resonance to occur between specified pitches an octave apart in turn.

When "Ctrl" = **Dmod**, the resonance is controlled by the dynamic modulation source. If **JS X** or **Rbn#16** is assigned as the modulation source, the pitch an octave higher and lower can be controlled, similar to when LFO is selected for Control Mode.

a: Invert

When "Ctrle" = **LFO** or **Dmod**, the controlled phase of either Voice 1 or 2 will be reversed. When the resonance pitch is set for Voice 1 (Resonance has a positive value), Voice 2 will resonate at a pitch an octave below (Resonance has a negative value).

d: V1 Pitch, d: Fine, g: V2 Pitch, g: Fine

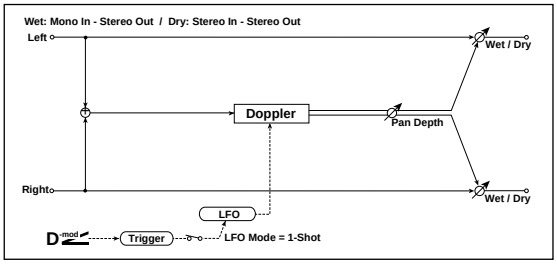
The Pitch parameter specifies the pitch of resonance by note name. The "Fine" parameter allows for fine adjustment in steps of cents.

e: HiDamp, h: HiDamp

This parameter sets the damping amount of resonant sound in the high range. Lower values will make a metallic sound with a higher range of harmonics.

30: Doppler

This effect simulates the "Doppler effect" of a moving sound with a changing pitch, similar to the siren of an passing ambulance. Mixing the effect sound with the dry sound will create a unique chorus effect.



a	Mode (LFO Mode) Switches LFO operation mode	Loop, 1-Shot ☞, D-mod
	Src (Source) When LFO Mode is set to 1-Shot, this modulation source triggers the LFO	Off...Tempo ☞
b	LFO Sync Switches between LFO reset on and off when LFO Mode is set to Loop	Off, On ☞
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:09, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz

d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Base (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪3, ♪., ♩3, ♩, ♩3, ♩., 𝅗𝅥 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
e	Pitch Dep (Pitch Depth) Sets the pitch variation of the moving sound	0...100 ☞, D-mod
	(Source) Selects the modulation source of pitch variation	Off...Tempo
	(Amount) Sets the modulation amount of pitch variation	–100...+100
f	Pan Dep (Pan Depth) Sets the panning of the moving sound	–100...+100 ☞, D-mod
	(Source) Selects the modulation source of panning	Off...Tempo
	(Amount) Sets the modulation amount of panning	–100...+100
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Mode, a: Src, b: LFO Sync

The "Mode" parameter switches LFO operation mode. When **Loop** is selected, the Doppler effect will be created repeatedly. If "LFO Sync" is set to **On**, the LFO will be reset when the modulation source specified with the "Src" parameter is turned on.

When "Mode" is set to **1-Shot**, the Doppler effect is created only once when the modulation source specified in the "Src" field is turned on. At this time if you do not set the "Src" parameter, the Doppler effect will not be created, and no effect sound will be output.

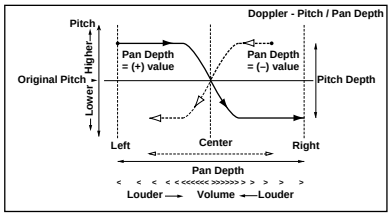
MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Doppler effect is triggered when the value changes from 63 or smaller to 64 or higher.

e: Pitch Dep

With the Doppler effect, the pitch is raised when the sound approaches, and the pitch is lowered when the sound goes away. This parameter sets this pitch variation.

f: Pan Dep

This parameter sets the width of the stereo image of the effect sound. With larger values, the sound seems to come and go from much further away. With positive values, the sound moves from left to right; with negative values, the sound moves from right to left.



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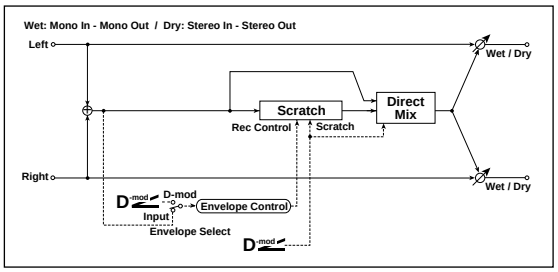
31: Scratch

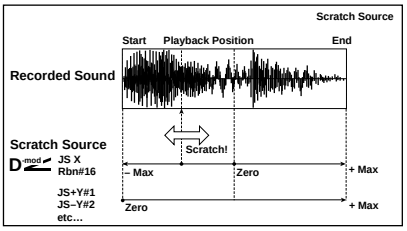
This effect is applied by recording the input signal and moving the modulation source. It simulates the sound of scratches you can make using a turntable.



a	Scratch Source Selects the modulation source for simulation control	Off...Tempo ☞, D-mod
b	Response(Scratch) Sets the speed of the response to the Scratch Source	0...100 ☞
c	Envelope (Envelope Select) Selects whether the start and end of recording is controlled via the modulation source or the input signal level	Dmod, Input ☞, D-mod
	Src (Source) Selects the modulation source that controls recording when Envelope is set to Dmod	Off...Tempo ☞
d	Threshold Sets the recording start level when Envelope is set to Input	0...100 ☞
e	Response(Env) Sets the speed of the response to the end of recording	0...100 ☞
f	Direct Mix Selects how a dry sound is mixed	Always On, Always Off, Cross Fade ☞
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Scratch Source, b: Response(Scratch)

The Scratch Source parameter enables you to select the modulation source that controls simulation. The value of the modulation source corresponds to the playback position. The Response(Scratch) parameter enables you to set the speed of the response to the modulation source.



c: Envelope, c:Src, d: Threshold

When "Envelope" is set to **Dmod**, the input signal will be recorded only when the modulation source value is 64 or higher. When "Envelope" is set to **Input**, the input signal will be recorded only when its level is over the Threshold value.
The maximum recording time is 1365msec. If this is exceeded, the recorded data will start being erased from the top.

e: Response(Env)

This parameter enables you to set the speed of the response to the end of recording. Set a smaller value when you are recording a phrase or rhythm pattern, and set a higher value if you are recording only one note.

f: Direct Mix

With **Always On**, a dry sound is usually output. With **Always Off**, dry sounds are not output. With **Cross Fade**, a dry sound is usually output, and it is muted only when scratching.
Set W / D to **Wet** to use this parameter effectively.

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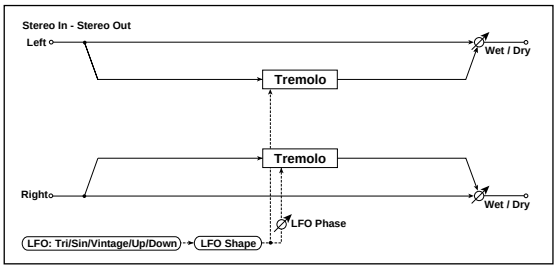
Mod. / P.Shift

Other modulation and pitch shift effects

32: St.Tremolo

(Stereo Tremolo)

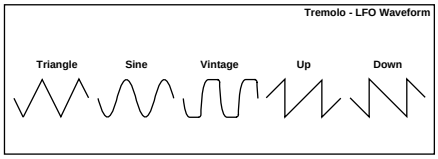
This effect modulates the volume level of the input signal. The effect is stereo, and offsetting the LFO of the left and right phases from each other produces a tremolo effect between left and right.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine, Vintg, Up, Down ☞
	Shape (LFO Shape) Determines how much the LFO waveform is changed	–100...+100 ☞ Fx:20
b	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:09, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Note (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪3, ♪., ♩3, ♩, ♩.3, ♩., 𝅗𝅥 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
e	Depth Sets the depth of LFO modulation	0...100 D-mod
	(Source) Selects the modulation source of the depth of modulation	Off...Tempo
	(Amount) Sets the modulation amount of the depth of modulation	–100...+100
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a:LFO Wave

This parameter selects the LFO waveform. **Vintg (Vintage)** wave simulates the characteristics of the tremolo created on a guitar amplifier. Combining this effect with the Amp Simulation will make a realistic, vintage tremolo amplifier sound.



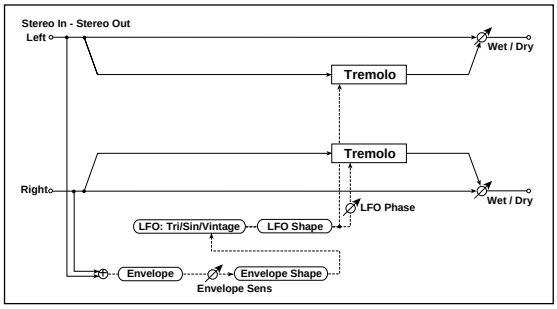
b: LFO Phase

This parameter determines the difference between the left and right LFO phases. A higher value will simulate the auto-pan effect in which the sound is panned between left and right.

33: St.Env.Tremlo

(Stereo Envelope Tremolo)

This effect uses the input signal level to modulate a stereo tremolo. You can simulate a tremolo effect that becomes deeper as it fades out while the level gets lower.



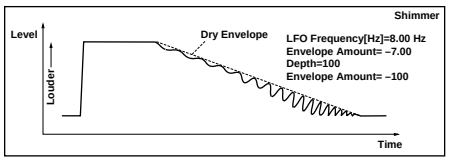
a	Envelope Sens (Envelope Sensitivity) Sets the envelope sensitivity of the input signal	0...100
b	Envelope Shape Sets the envelope curve shape of the input signal	–100...+100
c	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine, Vintg
	Shape (LFO Shape) Determines how much the LFO waveform is changed	–100...+100 ☞ Fx:20
d	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞ Fx:32
e	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞
	(Envelope Amount) Sets the changes of the LFO speed according to the input signal level	–20.00...+20.00Hz ☞
f	Depth Sets the depth of LFO modulation	0...100 ☞
	(Envelope Amount) Sets the changes of the modulation depth according to the input signal level	–100...+100 ☞
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

e: Freq, e: (Envelope Amount), f: Depth, f: (Envelope Amount)

These parameters set the modulation via an envelope (input signal level).

The "LFO speed" is obtained by adding the "Freq" value to the "(Envelope Amount)" value multiplied by the input signal. The LFO modulation depth is obtained by adding the Depth value to the "(Envelope Amount)" value multiplied by the input signal level.

- The following example indicates that the "Depth" is **0** with an LFO Frequency of 1.0Hz and the maximum input, and that the "Depth" is **100** with a Frequency of 8.0 Hz with zero input.
  "Freq"=**8.00** Hz, "Envelope Amount"=**–7.00**
  "Depth"=**100**, "Envelope Amount"=**–100**



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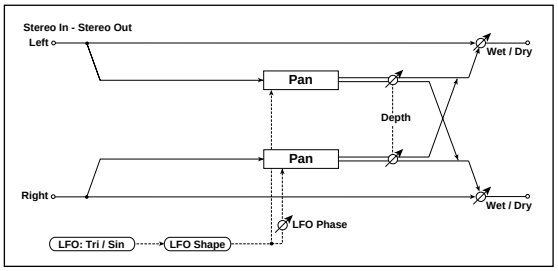
34: St.Auto Pan

(Stereo Auto Pan)

This Auto Pan effect pans sound between left and right. It is stereo, and shifting the left and right LFO phases from each other will simulate the sound of the left and right channels crossing over each other by turns, or chasing each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed ☞	–100...+100
b	LFO Phase Sets the LFO phase difference between the left and right ☞	–180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed ☞ Fx:09, D-mod	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes ☞ Fx:09, Sync	Off, On
	BPM Selects MIDI Clock and assigns tempo ☞ Fx:09	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed ☞ Fx:09	𝅘𝅥𝅯, 𝅘𝅥𝅯₃, 𝅘𝅥𝅮, 𝅘𝅥𝅮₃, ♩, ♩₃, 𝅗𝅥, 𝅗𝅥₃, 𝅝
	Times Sets the number of notes that specify the LFO speed ☞ Fx:09	1...16
e	Depth Sets the depth of LFO modulation	0...100
	(Source) Selects the modulation source of the depth of modulation	Off...Tempo
	(Amount) Sets the modulation amount of the depth of modulation	–100...+100
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

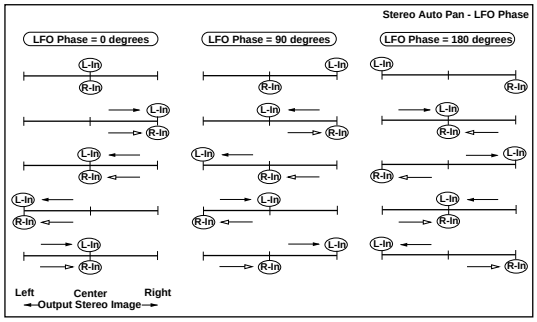
a: Shape

You can change the panning curve by modifying the LFO waveform.

b: LFO Phase

This parameter determines the difference in the left and right LFO phases. When you change the value gradually from **0**, the sound from the left and right channels will chase each other around. If you set the parameter to **+180** or **–180**, the sound from each channel will cross over each other.

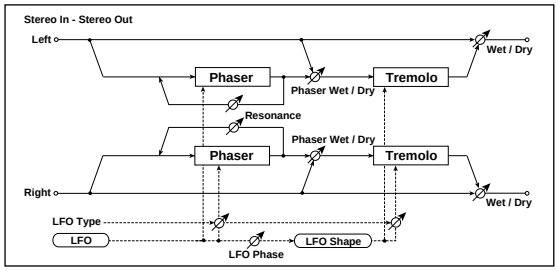
You need to input different sounds to each channel in order for this parameter to be effective.



35: St.Phasr+Trml

(Stereo Phaser + Tremolo)

This effect has a stereo phaser and tremolo LFOs linked together. Swelling phaser modulation and tremolo effects synchronize with each other, creating a soothing modulation effect. It is suitable for electric piano type sounds.



a	Type: Selects the type of the tremolo and phaser LFOs ☞	Phs - Trml...Phs LR - Trml LR
b	LFO Phase Sets the phase difference between the tremolo and phaser LFOs ☞	–180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed ☞ Fx:09, D-mod	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes ☞ Fx:09, Sync	Off, On
	BPM Selects MIDI Clock and assigns tempo ☞ Fx:09	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed ☞ Fx:09	𝅘𝅥𝅯, 𝅘𝅥𝅯₃, 𝅘𝅥𝅮, 𝅘𝅥𝅮₃, ♩, ♩₃, 𝅗𝅥, 𝅗𝅥₃, 𝅝
	Times Sets the number of notes that specify the LFO speed ☞ Fx:09	1...16
e	P Manu (Phaser Manual) Sets the phaser frequency range	0...100
	Resonanc (Resonance) Sets the phaser resonance amount	–100...+100
f	P Dep (Phaser Depth) Sets the phaser modulation depth	0...100
	(Source) Selects the modulation source for the phaser modulation depth	Off...Tempo
	(Amount) Sets the modulation amount for the phaser modulation depth	–100...+100
g	P W/D (Phaser W/D) Sets the balance between the phaser effect and dry sounds ☞	–Wet...–2:99, Dry, 2:99...Wet
	T Shape (Tremolo Shape) Sets the degree of the tremolo LFO shaping ☞ Fx:20	–100...+100

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h	T Dep (Tremolo Depth) Sets the tremolo modulation depth	0...100 D-mod
	(Source) Selects the modulation source for the tremolo modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the tremolo modulation depth	–100...+100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds ☞, D-mod	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Type, b: LFO Phase

Select the type of phaser LFO and tremolo LFO for the "Type" parameter. How the effect sound moves or rotates depends on the type of LFO. Selecting "LFO Phase" enables you to offset the timing of the phaser peak and control a subtle movement and rotation of the sound.

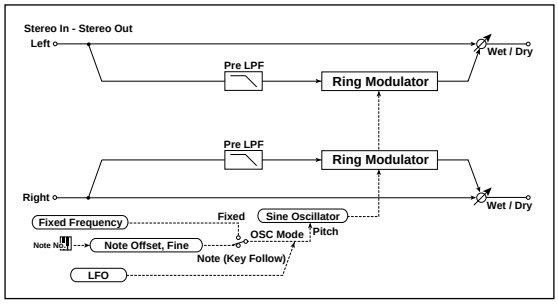
f: P W/D, i: W/D

The "P W / D" parameter sets the balance between the phaser output and the dry sound. The "W / D" parameter sets the balance between the final phaser and tremolo output level and the dry sound.

36: St.Ring Mod

(Stereo Ring Modulator)

This effect creates a metallic sound by applying the oscillators to the input signal. Use the LFO or Dynamic Modulation to modulate the oscillator to create a radical modulation. Matching the oscillator frequency with a note number will produce a ring modulation effect in specific key ranges.



a	Pre LPF Sets the damping amount of the high range input to the ring modulator ☞	0...100
b	OSC Mode Switching between specifying the oscillator frequency and using a note number ☞	Fixed, Note (Key Follow)
c	F (Fixed Frequency) Sets the oscillator frequency when OSC Mode is set to Fixed ☞, D-mod	0...12.00kHz
	(Source) Selects the modulation source for the oscillator frequency when OSC Mode is set to Fixed	Off...Tempo
	(Amount) Sets the modulation amount of the oscillator frequency when OSC Mode is set to Fixed	–12.00...+12.00kHz
d	Note Offset Sets the pitch difference from the original note when OSC Mode is set to Note (Key Follow) ☞	–48...+48
	Fine (Note Fine) Fine-adjusts the oscillator frequency ☞	–100...+100
e	lfoF (LFO Frequency) Sets the LFO speed of the oscillator frequency modulation ☞ Fx:09, D-mod	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes ☞ Fx:09, Sync	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Base (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪3, ♪., ♩3, ♩, ♩3, 𝅗𝅥, 𝅗𝅥3, 𝅗𝅥., 𝅝 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
g	Depth (LFO Depth) Sets the depth of LFO modulation for the oscillator frequency	0...100 D-mod
	(Source) Selects the modulation source of the depth of modulation	Off...Tempo
	(Amount) Sets the modulation amount of the depth of modulation	–100...+100
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Pre LPF

This parameter enables you to set the damping amount of the high range sound input to the ring modulator. If the input sound contains lots of harmonics, the effect may sound dirty. In this case, cut a certain amount of high range.

b: OSC Mode

This parameter determines whether or not the oscillator frequency follows the note number.

c: F

This parameter sets the oscillator frequency when "OSC Mode" is set to **Fixed**.

d: Note Offset, d: Fine

These parameters for the oscillator are used when "OSC Mode" is set to **Note (Key Follow)**. The "Note Offset" sets the pitch difference from the original note in semitone steps. The "Fine" parameter fine-adjusts the pitch in cent steps. Matching the oscillator frequency with the note number produces a ring modulation effect in the correct key.

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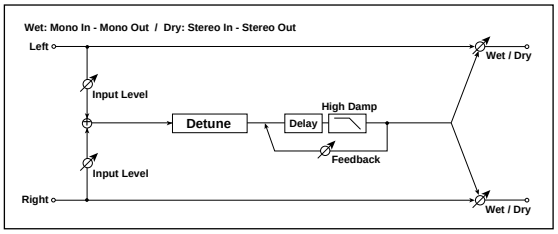
37: Detune

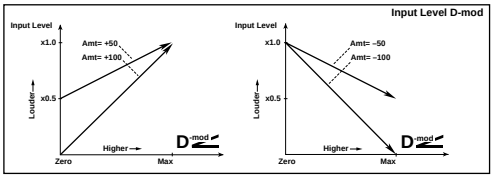
Using this effect, you can obtain a detune effect that offsets the pitch of the effect sound slightly from the pitch of the input signal. Compared to the chorus effect, a more natural sound thickness will be created.



a	Sft (Pitch Shift) Sets the pitch difference from the input signal	–100...+100cent D-mod
	(Source) Selects the modulation source of the pitch shift	Off...Tempo
	(Amount) Sets the modulation amount of the pitch shift	–100...+100cent
b	Delay (Delay Time) Sets the delay time	0...1000ms
c	Feedback Sets the feedback amount	–100...+100
d	High Damp Sets the damping amount in the high range	0...100%
e	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	–100...+100 ☞, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

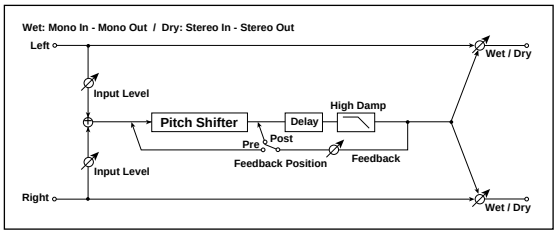
e: InLvl Mod, e: Src

This parameter sets the dynamic modulation of the input level.



38: Pitch Shifter

This effect changes the pitch of the input signal. You can select from three types: Fast (quick response), Medium, and Slow (preserves tonal quality). You can also create an effect in which the pitch is gradually raised (or dropped) using the delay with feedback.



a	Mode Switches Pitch Shifter mode	Slow, Medium, Fast ☞
b	Shift (Pitch Shift) Sets the pitch shift amount by steps of a semitone	–24...+24 ☞, D-mod
	(Source) Selects the modulation source of pitch shift amount	Off...Tempo ☞
	(Amount) Sets the modulation amount of pitch shift amount	–24...+24 ☞
c	Fine Sets the pitch shift amount by steps of a cent	–100...+100cent ☞, D-mod
	(Amount) Sets the modulation amount of pitch shift amount	–100...+100cent ☞
d	Delay (Delay Time) Sets the delay time	0...1000ms
e	Feedback Position Switches the feedback connection.	Pre, Post ☞
f	Feedback Sets the feedback amount	–100...+100 ☞
	HiDamp (High Damp) Sets the damping amount in the high range	0...100%
g	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	–100...+100 ☞ Fx:37, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞ Fx:37
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Mode

This parameter switches the pitch shifter operating mode. With **Slow**, tonal quality will not be changed too much. With **Fast**, the effect becomes a Pitch Shifter that has a quick response, but may change the tone. **Medium** is in between these two. If you do not need to set too much pitch shift amount, set this parameter to **Slow**. If you wish to change the pitch significantly, use **Fast**.

b: Shift, b: (Source), b: (Amount), c: Fine, c: (Amount)

The amount of pitch shift will use the value of the "Shift" plus the "Fine" value. The amount of modulation will use the c: (Amount) value plus d: "(Amount)."
Modulation Source is used both for "Shift" and "Fine."

e: Feedback Position, f: Feedback

When "Feedback Position" is set to **Pre**, the pitch shifter output is again input to the pitch shifter. Therefore, if you specify a higher value for the Feedback parameter, the pitch will be raised (or lowered) more and more each time feedback is repeated.
If "Feedback Position" is set to **Post**, the feedback signal will not pass through the pitch shifter again. Even if you specify a higher value for the Feedback parameter, the pitch-shifted sound will be repeated at the same pitch.

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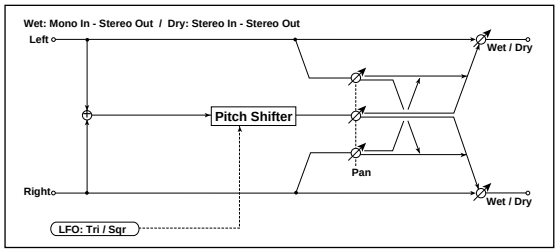
39: PitchShft Mod

(Pitch Shift Modulation)

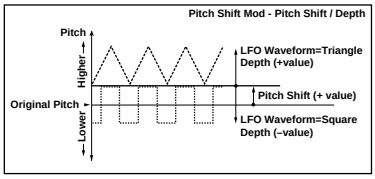
This effect modulates the detuned pitch shift amount using an LFO, adding a clear spread and width to the sound by panning the effect sound and dry sound to the left and right. This is especially effective when the effect sound and dry sound output from stereo speakers are mixed.



a	Pitch Shift Sets the pitch difference from the input signal	–100...+100cent ☞
b	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Square
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz ☞ Fx:09, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	–20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☞ Fx:09, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:09
	Base (Base Note) Selects the type of notes that specify the LFO speed	𝅘𝅥𝅯, 𝅘𝅥𝅯𝅘𝅥𝅯3, 𝅘𝅥𝅯𝅘𝅥𝅯, 𝅘𝅥𝅯3, 𝅘𝅥, 𝅘𝅥3, 𝅗𝅥, 𝅝 ☞ Fx:09
	Times Sets the number of notes that specify the LFO speed	1...16 ☞ Fx:09
e	Depth Sets the LFO modulation depth for pitch shift amount	–100...+100 ☞, D-mod
	(Source) Selects the modulation source of the depth of modulation	Off...Tempo
	(Amount) Sets the modulation amount of the depth of modulation	–100...+100
f	Pan Sets the panning effect sound and dry sound separately	L, 1:99...99:1, R ☞
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet ☞, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Pitch Shift [cent], e: Depth

These parameters set the amount of pitch shift and amount of modulation by means of the LFO.



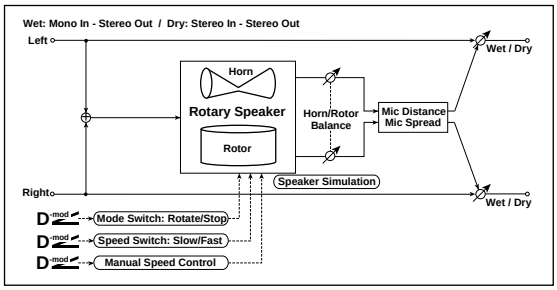
f: Pan, g: W/D

The Pan parameter pans the effect sound and dry sound to the left and right. With **L**, the effect sound is panned left, and the dry sound is panned right. With a W / D = **Wet** setting, the effect and dry sound will be output in a proportion of 1:1.

40: Rotary SP

(Rotary Speaker)

This effect simulates a rotary speaker, and obtains a more realistic sound by simulating the rotor in the low range and the horn in the high range separately. The effect also simulates the stereo microphone settings.



a	Mode (Mode Switch) Switches between speaker rotation and stop	Rotate, Stop D-mod
	(Source) Selects the modulation source that toggles between rotation and stop	Off...Tempo
	(Sw) Selects switching mode of the modulation source that toggles between rotation and stop	Tggl, Mmnt ☞
b	Speed (Speed Switch) Switches the speaker rotation speed between slow and fast	Slow, Fast D-mod
	(Source) Selects the modulation source that toggles between slow and fast	Off...Tempo
	(Sw) Selects switching mode of the modulation source that toggles between slow and fast	Tggl, Mmnt ☞
c	H/R.Bal (Horn/Rotor Balance) Sets the level balance between the high-range horn and low-range rotor	Rot, 1...99, Hrn
	ManuSp (Manual Speed Control) Selects the modulation source in case the rotation speed is changed directly	Off...Tempo ☞, D-mod
d	Horn Accel (Horn Acceleration) How quickly the horn rotation speed in the high range is switched	0...100 ☞
	Ratio (Horn Ratio) Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting “Stop” will stop the rotation	Stop, 0.50...2.00
e	Rotor Accel (Rotor Acceleration) Determines how quickly the rotor rotation speed in the low range is switched	0...100 ☞
	Ratio (Rotor Ratio) Adjusts the (low-range side) rotor rotation speed. Standard value is 1.00. Selecting “Stop” will stop the rotation	Stop, 0.50...2.00
f	MicDistance Sets the distance between the microphone and rotary speaker	0...100 ☞
	Spread (Mic Spread) Sets the angle of left and right microphones	0...100 ☞
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: (Sw)

This parameter sets how the modulation source switches between rotation and stop.

When “Sw” = **Tggl (Toggle)**, the speaker rotates or stops alternately each time you press the pedal or operate the joystick.

MIDI Each time the value for the modulation source exceeds 64, the speaker rotates or stops alternately.

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When "(Sw)" = **Mmnt (Moment)**, the speaker is rotating. It stops only when you press the pedal or operate the joystick.

MIDI Rotation will occur when the value of the modulation source is less than 64, and will stop when the value is 64 or greater.

b: (Sw)

This parameter sets how the rotation speed (slow and fast) is switched via the modulation source.
When "(Sw)" = **Tggl (Toggle)**, the speed is switched between slow and fast each time you press the pedal or operate the joystick.

MIDI Slow / fast will alternate each time the value of the modulation source exceeds 64.

When "(Sw)" = **Mmnt (Moment)**, the speed is usually slow. It becomes fast only when you press the pedal or operate the joystick.

MIDI When a value for the modulation source is less than 64, "slow" speed is selected, and when the value is 64 or higher, "fast" is selected.

c: ManuSp

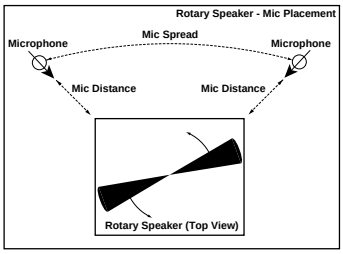
If you wish to control the speaker rotation speed manually, not switching between Slow and Fast, select the modulation source in the "ManuSp" field. If manual control is not necessary, set this field to **Off**.

d: Horn Accel, e: Rotor Accel

On a real rotary speaker, the rotation speed is accelerated or decelerated gradually after you switch the speed. The "Horn Accel" parameter sets the speed at which the rotation is accelerated or decelerated.

f: MicDistance, f: Spread

This is a simulation of stereo microphone settings.



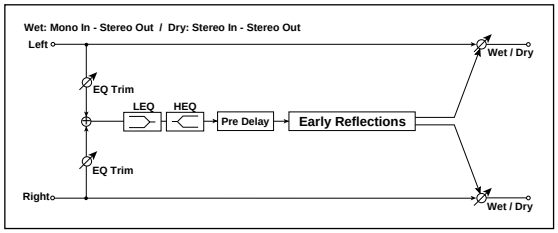
ER / Delay

Early reflection and delay effects

41: Early Reflect

(Early Reflections)

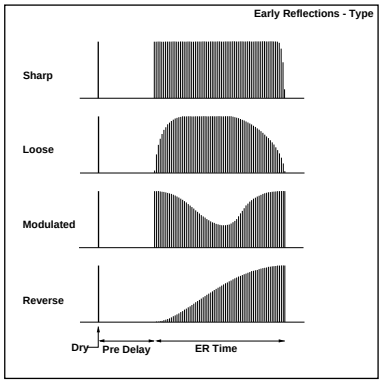
This effect is only the early reflection part of a reverberation sound, and adds presence to the sound. You can select one of the four decay curves.



a	Type Selects the decay curve for the early reflection	Sharp, Loose, Modulated, Reverse ☞
b	ER Time Sets the time length of early reflection	10...800ms
c	Pre Delay Sets the time taken from the original sound to the first early reflection	0...200ms
d	Pre EQ Trim Sets the input level of EQ applied to the effect sound	0...100
e	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15.0...+15.0dB
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D→mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Type

This parameter selects the decay curve for the early reflection.



Effect

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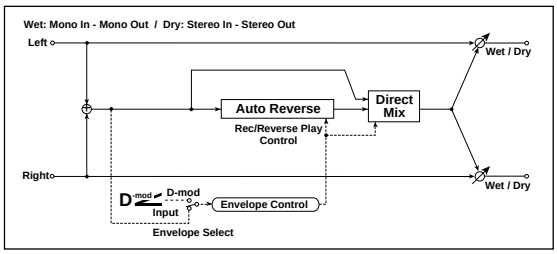
42: Auto Reverse

This effect records the input signal and automatically plays it in reverse (the effect is similar to a tape reverse sound).



a	Rec Mode Sets the recording mode	Single, Multi ☞
b	Reverse Time Sets the maximum duration of the reverse playback	20...1320ms ☞
c	Envelope (Envelope Select) Selects whether the start and end of recording is controlled via the modulation source or the input signal level	Dmod, Input ☞, D-mod
	Src (Source) Selects the modulation source that controls recording when Envelope is set to Dmod	Off...Tempo ☞
d	Threshold Sets the recording start level when Envelope is set to Input	0...100 ☞
e	Response Sets the speed of the response to the end of recording	0...100 ☞ Fx:31
f	Direct Mix Selects how a dry sound is mixed	Always On, Always Off, Cross Fade ☞ Fx:31
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

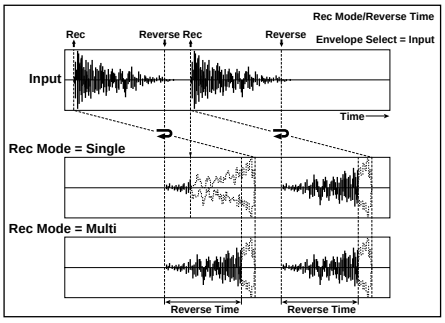
a: Rec Mode, b: Reverse Time

When "Rec Mode" is set to **Single**, you can set up to 1320msec for "Reverse Time." If recording starts during the reverse playback, the playback will be interrupted.

When "Rec Mode" is set to **Multi**, you can make another recording during the reverse playback. However, the maximum Reverse Time is limited to 660msec.

If you wish to record a phrase or rhythm pattern, set "Rec Mode" to **Single**. If you record only one note, set "Rec Mode" to **Multi**.

The "Reverse Time" parameter specifies the maximum duration of the reverse playback. The part in excess of this limit will not be played in reverse. If you wish to add short pieces of the reverse playback of single notes, make the "Reverse Time" shorter.



c: Envelope, c: Src, d: Threshold

These parameters select the source to control the start and end of recording.

When "Envelope" is set to **Dmod**, the input signal will be recorded only when the value of the modulation source selected by the Src parameter is 64 or higher.

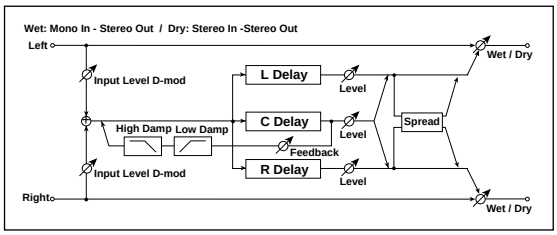
When "Envelope" is set to **Input**, the input signal will be recorded only when its level exceeds the Threshold level.

When recording is completed, reverse playback starts immediately.

43: LCR Delay

(L/C/R Delay)

This multitap delay outputs three Tap signals to the left, right, and center respectively. You can also adjust the left and right spread of the delay sound.



a	L Delay (L Delay Time) Sets the delay time of TapL	0...1360ms
	Level Sets the output level of TapL	0...50
b	C Delay (C Delay Time) Sets the delay time of TapC	0...1360ms
	Level Sets the output level of TapC	0...50
c	R Delay (R Delay Time) Sets the delay time of TapR	0...1360ms
	Level Sets the output level of TapR	0...50
d	C Fb (C Delay Feedback) Sets the feedback amountof TapC	–100...+100 D-mod
	(Source) Selects the modulation source of the TapC feedback amount	Off...Tempo
	(Amount) Sets the modulation amount of the TapC feedback amount	–100...+100
e	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞
f	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	–100...+100 ☞ Fx:37, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞ Fx:37
g	Spread Sets the width of the stereo image of the effect sound	0...50 ☞
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

e: HiDamp, e: LoDamp

These parameters set the damping amount of high range and low range. The tone of the delayed sound becomes darker and lighter as it feeds back.

g: Spread

This parameter sets the pan width of the effect sound. The stereo image is widest with a value of **50**, and the effect sound of both channels is output from the center with a value of **0**.

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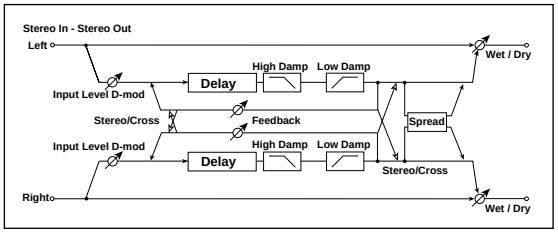
44: St/Cross Dly

(Stereo/Cross Delay)

This is a stereo delay, and can by used as a cross-feedback delay effect in which the delay sounds cross over between the left and right by changing the feedback routing.

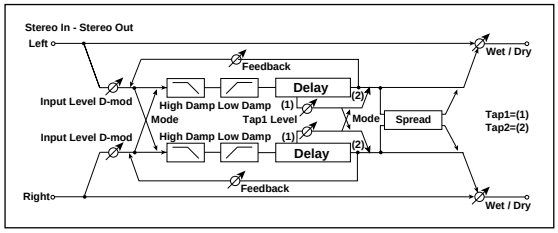


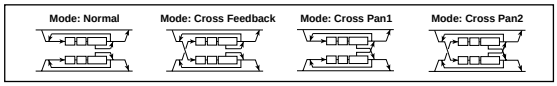
a	Stereo/Cross Switches between stereo delay and cross-feedback delay	Stereo, Cross
b	L Delay (L Delay Time) Sets the delay time for the left channel	0.0...680.0ms
c	R Delay (R Delay Time) Sets the delay time for the right channel	0.0...680.0ms
d	L Fb (L Feedback) Sets the feedback amount for the left channel	–100...+100 D-mod
	(Source) Selects the modulation source of feedback amount	Off...Tempo
	(Amount L) Sets the modulation amount of the left channel feedback	–100...+100
e	R Fb (R Feedback) Sets the feedback amount for the right channel	–100...+100 D-mod
	(Amount R) Sets the modulation amount of the right channel feedback	–100...+100
f	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
g	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞ Fx:43
h	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	–100...+100 ☞ Fx:37, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞ Fx:37
i	Spread Sets the width of the stereo image of the effect sound	–50...+50 ☞ Fx:43
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

45: St.MltTap Dly

(Stereo Multitap Delay)

The left and right Multitap Delays have two taps respectively. Changing the routing of feedback and tap output allows you to create various patterns of complex effect sounds.





a	Mode Switches the left and right delay routing	Normal, Cross Feedback, Cross Pan1, Cross Pan2 ☞
b	Tap1 Time Sets the Tap1 delay time	0.0...680.0ms
c	Tap2 Time Sets the Tap2 delay time	0.0...680.0ms
d	Tap1 Level Sets the Tap1 output level	0...100 ☞
e	Fb(T2) (Tap2 Feedback) Sets the Tap2 feedback amount	–100...+100 D-mod
	(Source) Selects the modulation source of the Tap2 feedback amount	Off...Tempo
	(Amount) Sets the modulation amount of the Tap2 feedback amount	–100...+100
f	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞ Fx:43
g	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	–100...+100 ☞ Fx:37, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞ Fx:37
h	Spread Sets the width of the stereo image of the effect sound	–100...+100 ☞ Fx:43, D-mod
	(Source) Selects the modulation source of the effect sound's stereo image width	Off...Tempo
	(Amount) Sets the modulation amount of the effect sound's stereo image width	–100...+100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Mode

You can change how the left and right delay signals are panned by modifying the routing of the left and right delay as shown in the figure above. You need to input different sounds to each channel in order for this parameter to be effective.

d: Tap1 Level

This parameter sets the output level of Tap1. Setting a different level from Tap2 will add a unique touch to a monotonous delay and feedback.

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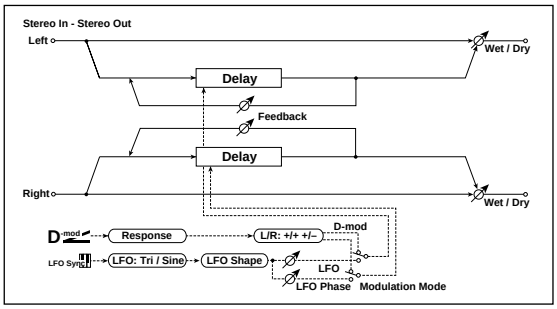
46: St.Mod. Delay

(Stereo Modulation Delay)

This stereo delay uses an LFO to sweep the delay time. The pitch also varies. You will obtain a delay sound with swell and shimmering. You can also control the delay time using a modulation source.



a	Mod Mode (Modulation Mode) Switches between LFO modulation control and modulation source control	LFO, Dmod
	Src (Source) Selects the modulation source that controls delay time	Off...Tempo
b	Dmod Reversed L/R control by modulation source	L/R:+/+, L/R:+/– ☞, D-mod
	Respons (Response) Sets the rate of response to the modulation source	0...30
c	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	–100...+100 ☞ Fx:20
d	LFO Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	LFO Sync Switches LFO reset off/on	Off, On ☞, D-mod
	Src (Source) Selects the modulation source that resets the LFO	Off...Tempo
f	L Phase (L LFO Phase) Sets the phase obtained when the left LFO is reset	–180...+180 ☞
	R Phase (R LFO Phase) Sets the phase obtained when the right LFO is reset	–180...+180 ☞
g	L Depth Sets the depth of the left LFO modulation	0...200
	R Depth Sets the depth of the right LFO modulation	0...200
h	L Dly (L Delay Time) Sets the left delay time	0.0...500.0
	R Dly (R Delay Time) Sets the right delay time	0.0...500.0
i	L Fb (L Feedback) Sets the feedback amount of left delay	–100...+100
	R Fb (R Feedback) Sets the feedback amount of right delay	–100...+100
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	–Wet...–1:99, Dry, 1:99...Wet ☞ Fx:10, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

b: Dmod

When the modulation source is used for control, this parameter reverses the left and right modulation direction.

e: LFO Sync, e: Src, f: L Phase, f: R Phase

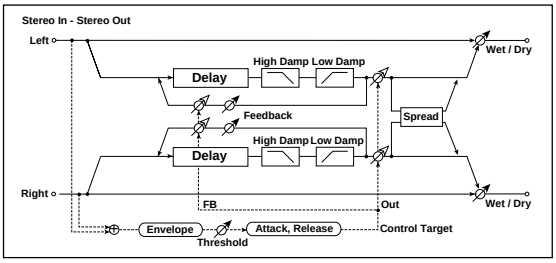
The LFO can be reset via a modulation source.
The “Src” parameter sets the modulation source that resets the LFO. For example, you can assign Gate as a modulation source so that the sweep always starts from the specified point.
“L Phase” and “R Phase” set the phase obtained when the left and right LFOs are reset. In this way, you can create changes in pitch sweep for the left and right channels individually.

MIDI The effect is off when a value of the modulation source specified in the “Src” parameter is 63 or smaller, and the effect is on when the value is 64 or higher. The LFO is triggered and reset to the “L Phase” and “R Phase” settings when the value changes from 63 or smaller to 64 or higher.

47: St.DynamicDly

(Stereo Dynamic Delay)

This stereo delay controls the level of delay according to the input signal level. You can use this as a ducking delay that applies delay to the sound only when you play keys at a high velocity or only when the volume level is low.



a	Ctrl Target (Control Target) Selects from no control, output, and feedback	None, Out, FB ☞
	Pol (Polarity) Reverses level control	+, – ☞
b	Threshold Sets the level to which the effect is applied	0...100 ☞
	Offset Sets the offset of level control	0...100 ☞
c	Attack Sets the attack time of level control	1...100 ☞
	Release Sets the release time of level control	1...100 ☞
d	L Delay (L Delay Time) Sets the delay time for the left channel	0.0...680.0ms
e	R Delay (R Delay Time) Sets the delay time for the right channel	0.0...680.0ms
f	Feedback Sets the feedback amount	–100...+100
g	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞ Fx:43
h	Spread Sets the width of the stereo image of the effect sound	–100...+100 ☞ Fx:43
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: Ctrl Target

This parameter selects no level control, delay output control (effect balance), or feedback amount control.

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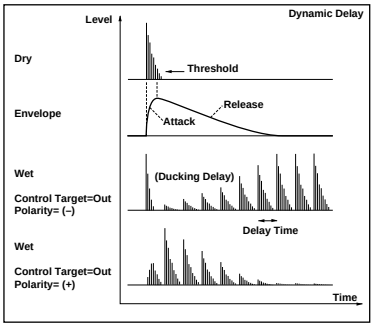
a: Pol, b: Threshold, b: Offset, c: Attack, d: Release

The “Offset” parameter specifies the value for the “Ctrl Target” parameter (that is set to None), expressed as the ratio relative to the parameter value (the “W / D” value with “Ctrl Target”=**Out**, or the “Feedback” value with “Ctrl Target”=**FB**).

When “Pol” is **positive**, the “Ctrl Target” value is obtained by multiplying the parameter value by the “Offset” value (if the input level is below the threshold), or equals the parameter value if the input level exceeds the threshold.

When “Pol” is **negative**, Ctrl Target value equals the parameter value if the input level is below the threshold, or is obtained by multiplying the parameter value by the “Offset” value if the level exceeds the threshold.

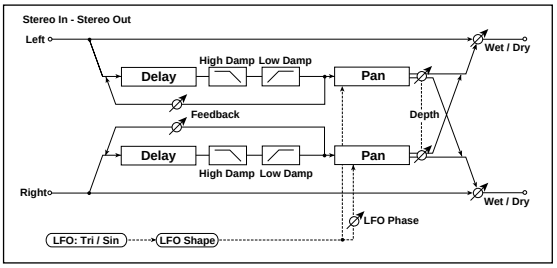
The “Attack” and “Release” parameters specify attack time and release time of delay level control.



48: St.AutoPanDly

(Stereo Auto Panning Delay)

This stereo delay effect pans the delay sound left and right using the LFO.

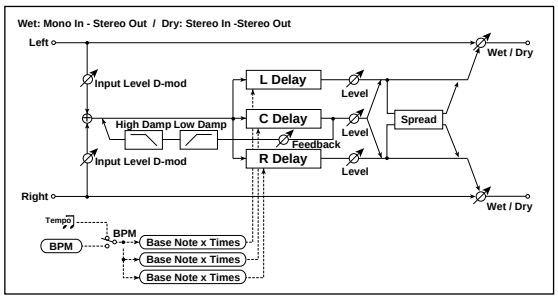


a	L Delay (L Delay Time) Sets the delay time for the left channel	0.0...680.0ms
b	R Delay (R Delay Time) Sets the delay time for the right channel	0.0...680.0ms
c	L Feedback Sets the feedback amount for the left channel	–100...+100
d	R Feedback Sets the feedback amount for the right channel	–100...+100
e	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞ Fx:43
f	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	–100...+100 ☞ Fx:20
g	LFO Phase Sets the LFO phase difference between the left and right	–180...+180deg ☞ Fx:34
h	Pan Freq (Panning Frequency) Sets the panning speed	0.02...20.00Hz
i	Pan Dep (Panning Depth) Sets the panning width	0...100 D-mod
	(Source) Selects the modulation source for the panning width	Off...Tempo
	(Amount) Set the modulation amount of the panning width	–100...+100
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

49: LCR BPM Delay

(L/C/R BPM Delay)

The L / C / R delay enables you to match the delay time with the song tempo. You can also synchronize the delay time with the arpeggiator or sequencer. If you program the tempo before performance, you can achieve a delay effect that synchronizes with the song in real-time. Delay time is set by notes.



a	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞, Sync
b	L Bs (L Delay Base Note) Selects the type of notes to specify the delay time for TapL	♪, ♪3, ♩, ♩3, 𝅗𝅥, 𝅗𝅥3, 𝅝, 𝅝. ☞, Sync
	Times Sets the number of notes to specify the delay time for TapL	1...16 ☞
	Level Sets the output level of TapL	0...50
c	C Bs (C Delay Base Note) Selects the type of notes to specify the delay time for TapC	♪, ♪3, ♩, ♩3, 𝅗𝅥, 𝅗𝅥3, 𝅝, 𝅝. ☞, Sync
	Times Sets the number of notes to specify the delay time for TapC	1...16 ☞
	Level Sets the output level of TapC	0...50
d	R Bs (R Delay Base Note) Selects the type of notes to specify the delay time for TapR	♪, ♪3, ♩, ♩3, 𝅗𝅥, 𝅗𝅥3, 𝅝, 𝅝. ☞, Sync
	Times Sets the number of notes to specify the delay time for TapR	1...16 ☞
	Level Sets the output level of TapR	0...50
e	C Fb (C Delay Feedback) Sets the feedback amount of TapC	–100...+100 D-mod
	(Source) Selects the modulation source for the TapC feedback	Off...Tempo
	(Amount) Sets the modulation amount of the TapC feedback	–100...+100
f	Time Over? > Displays an error message when the delay time exceeds the upper limit	----, OVER! ☞
g	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞ Fx:43

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h	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	–100...+100 ☞ Fx:37, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞ Fx:37
i	Spread Sets the width of the stereo image of the effect sound	0...50 ☞ Fx:43
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: BPM, b: L Bs, b: Times, c: C Bs, c: Times, d: R Bs, d: Times

The delay time is the length of the note obtained by multiplying the "Bs" parameter by the Times value, in relation to the tempo specified by the "BPM" parameter (or the MIDI Clock tempo if "BPM" is set to **MIDI**).

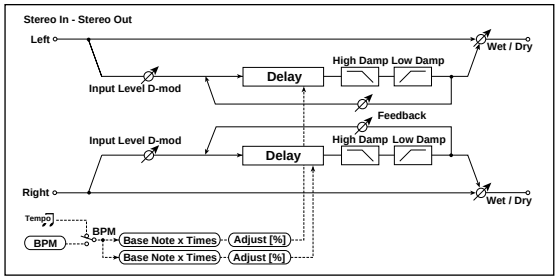
f: Time Over? >

You can set the delay time up to 1365msec. If the delay time exceeds this limit, the error message "OVER!" appears in the display. Set the delay time parameters so that this message will not appear. "Time Over?>" is only a display parameter.

50: St.BPM Delay

(Stereo BPM Delay)

This stereo delay enables you to set the delay time to match the song tempo.



a	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☞ Fx:49, Sync
b	L Bs (L Delay Base Note) Selects the type of notes to specify the left channel delay time	♪., ♪3, ♪, ♩3, ♩., ♩3, ♩, 𝅗𝅥
		☞ Fx:49, Sync
	Times Sets the number of notes to specify the left channel delay time	1...16 ☞ Fx:49
	Adj (Adjust) Fine-adjust the left channel delay time	–2.50...+2.50%
c	R Bs (R Delay Base Note) Selects the type of notes to specify the right channel delay time	♪., ♪3, ♪, ♩3, ♩., ♩3, ♩, 𝅗𝅥
		☞ Fx:49, Sync
	Times Sets the number of notes to specify the right channel delay time	1...16 ☞ Fx:49
	Adj (Adjust) Fine-adjust the right channel delay time	–2.50...+2.50%
d	L Fb (L Feedback) Sets the feedback amount for the left channel	–100...+100 D-mod
	(Source) Selects the modulation source of feedback amount	Off...Tempo
	(Amount L) Sets the modulation amount of the left channel feedback	–100...+100
e	R Fb (R Feedback) Sets the feedback amount for the right channel	–100...+100 D-mod
	(Amount R) Sets the modulation amount of the right channel feedback	–100...+100

f	Time Over? L > Display the error message if the left channel delay time exceeds the upper limit	----, OVER! ☞
	R > Display the error message if the right channel delay time exceeds the upper limit	----, OVER! ☞
g	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞ Fx:43
h	InLvl Mod (Input Level Mod [%]) Sets the modulation amount of the input level	–100...+100 ☞ Fx:37, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞ Fx:37
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

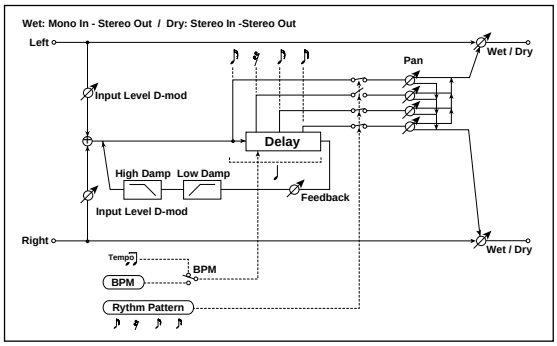
f: Time Over? L >, f: R >

You can set the delay time up to 682msec. If the delay time exceeds this limit, the error message "OVER!" appears in the display. Set the delay time parameters so that this message will not appear. "Time Over?>" is only a display parameter.

51: Sequence Dly

(Sequence Delay)

This four-tap delay enables you to select a tempo and rhythm pattern to set up each tap.



a	BPM Selects MIDI Clock and assigns tempo	MIDI, 44...240 ☞, Sync
	Rhythm (Rhythm Pattern) Selects a rhythm pattern	♪– – – ... ♪♪♪3 ☞, Sync
b	Tap1 Pan Sets the panning of Tap1	L, 1...99, R
c	Tap2 Pan Sets the panning of Tap2	L, 1...99, R
d	Tap3 Pan Sets the panning of Tap3	L, 1...99, R
e	Tap4 Pan Sets the panning of Tap4	L, 1...99, R
f	Fb (Feedback) Sets the feedback amount	–100...+100 D-mod
	(Source) Selects the modulation source of feedback amount	Off...Tempo
	(Amount) Sets the modulation amount of the feedback	–100...+100
g	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% ☞ Fx:43

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h	InLvl Mod (Input Level Mod [%]) Sets the modulation amount of the input level	–100...+100 ☞ Fx:37, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo ☞ Fx:37
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

a: BPM, a: Rhythm

With the tempo specified by the "BPM" parameter (or the MIDI Clock tempo if "BPM" is set to **MIDI**), the length of one beat equals the feedback delay time, and the interval between taps becomes equal. Selecting a rhythm will automatically turn the tap outputs on and off. When "BPM" is set to **MIDI**, the lower limit of the "BPM" is **44**.

Reverb

Reverb effects

These effects simulate the ambience of reverberation in concert halls.

52: Rev Hall

(Reverb Hall)

This hall-type reverb simulates the reverberation of mid-size concert halls or ensemble halls.

53: Rev Smth. Hall

(Reverb Smooth Hall)

This hall-type reverb simulates the reverberation of larger halls and stadiums, and creates a smooth release.

54: Rev Wet Plate

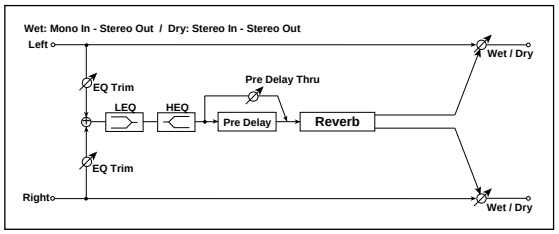
(Reverb Wet Plate)

This plate reverb simulates warm (dense) reverberation.

55: Rev Dry Plate

(Reverb Dry Plate)

This plate reverb simulates dry (light) reverberation.



a	Reverb Time Sets the reverberation time	0.1...10.0s
b	High Damp Sets the damping amount in the high range	0...100%
c	Pre Delay Sets the delay time from the dry sound	0...200ms ☞
d	Pre Delay Thru Sets the mix ratio of non-delay sound	0...100% ☞
e	Pre EQ Trim Sets the EQ input level	0...100
f	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

c: Pre Delay, d: Pre Delay Thru

The "Pre Delay" sets the delay time to the reverb input, allowing you to control spaciousness.

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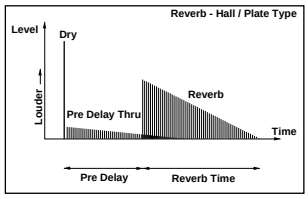
Using the “Pre Delay Thru” parameter, you can mix the dry sound without delay, emphasizing the attack of the sound.



56: Rev Room

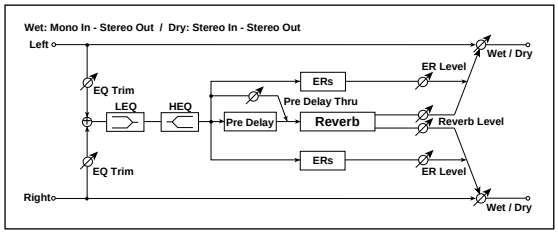
(Reverb Room)

This room-type reverb emphasizes the early reflections that make the sound tighter. Changing the balance between the early reflections and reverb sound allows you to simulate nuances, such as the type of walls of a room.

57: Rev Brt. Room

(Reverb Bright Room)

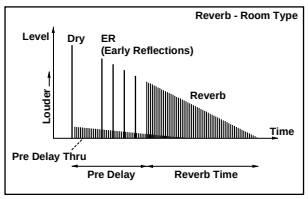
This room-type reverb emphasizes the early reflections that make the sound brighter. See 56: Reverb Room.



a	Reverb Time Sets the reverberation time	0.1...3.0sec
b	High Damp Sets the damping amount in the high range	0...100%
c	Pre Delay Sets the delay time from the dry sound	0...200ms ☞ Fx:52
d	Pre Delay Thru Sets the mix ratio of non-delay sound	0...100% ☞ Fx:52
e	Pre EQ Trim Sets the EQ input level	0...100
f	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
g	ER Level Sets the level of early reflections	0...100 ☞
h	Reverb Level Sets the reverberation level	0...100 ☞
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

g: ER Level, h: Reverb Level

These parameters set the early reflection level and reverb level. Changing these parameter values allows you to simulate the type of walls in the room. That is, a larger “ER Level” simulates a hard wall, and a larger “Reverb Level” simulates a soft wall.



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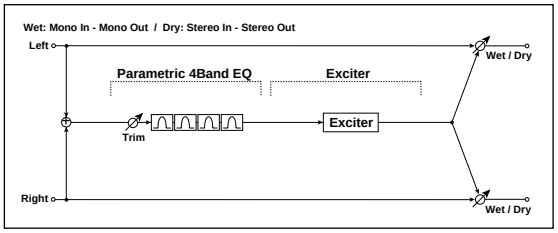
Mono → Mono Chain

Effects that combine two mono effects connected in series

58: P4EQ–Exciter

(Parametric 4-Band EQ – Exciter)

This effect combines a mono-type four-band parametric equalizer and an exciter.

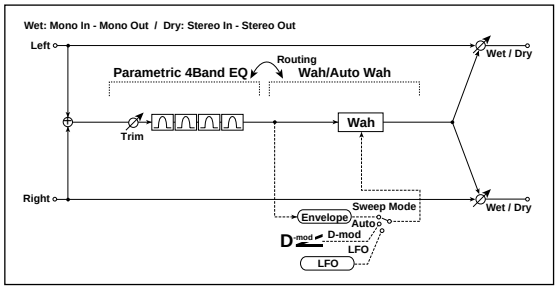


a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18...+18dB
f	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	–100...+100 ☞ Fx:11
g	Emphatic Point Sets the frequency range to be emphasized	0...70 ☞ Fx:11
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

59: P4EQ–Wah

(Parametric 4-Band EQ – Wah / Auto Wah)

This effect combines a mono-type four-band parametric equalizer and a wah. You can change the order of the connection.



a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18...+18dB
f	[WAH] FreqBtm (Frequency Bottom) Sets the lower limit of the wah center frequency	0...100 ☞ Fx:09
	Top (Frequency Top) Sets the upper limit of the wah center frequency	0...100 ☞ Fx:09
g	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO	Auto, Dmod, LFO ☞ Fx:09, D-mod
	Src (Source) Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
h	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	Res (Resonance) Sets the resonance amount	0...100
	LPF (Low Pass Filter) Switches the wah low pass filter on and off	Of, On
i	[Routing] Changes the order of the parametric equalizer and wah connection	PEQ → WAH, WAH → PEQ
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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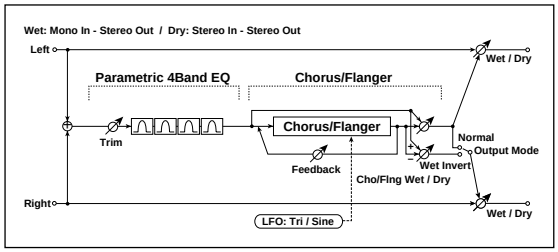
60: P4EQ–Cho/Fl

(Parametric 4-Band EQ – Chorus/Flanger)

This effect combines a mono-type four-band parametric equalizer and a chorus/flanger.



a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18...+18dB
f	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
g	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	–100...+100 ☞ Fx:20
h	C/F W/D (Cho/Flng Wet/Dry) Sets the effect balance of the chorus/flanger	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 20
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv ☞
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

h: Out

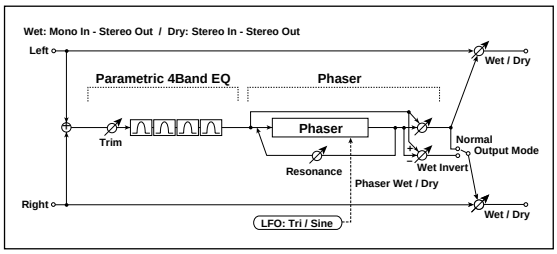
When **Wet Inv** is selected, the right channel phase of the chorus/flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus/flanger effects.

61: P4EQ–Phaser

(Parametric 4-Band EQ – Phaser)

This effect combines a mono-type four-band parametric equalizer and a phaser.



a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18...+18dB
f	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
g	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	–100...+100 ☞ Fx:23
h	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 23
	Output Mode Selects the phaser output mode	Normal, Wet Inv ☞ Fx:60
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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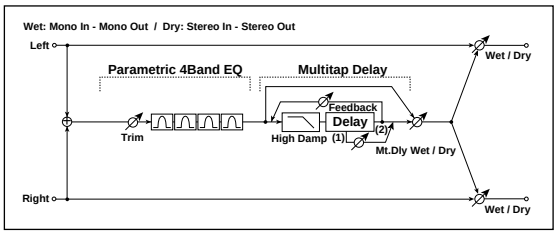
62: P4EQ–M.Dly

(Parametric 4-Band EQ – Multitap Delay)

This effect combines a mono-type four-band parametric equalizer and a multitap delay.

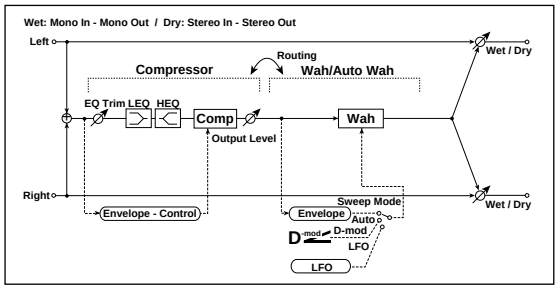


a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18...+18dB
f	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
g	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 ☞ Fx:45
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	–100...+100
h	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 2:98...98:2, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

63: Comp–Wah

(Compressor – Wah / Auto Wah)

This effect combines a mono-type compressor and a wah. You can change the order of the connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
b	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[WAH] FreqBtm (Frequency Bottom) Sets the lower limit of the wah center frequency	0...100 ☞ Fx:09
	Top (Frequency Top) Sets the upper limit of the wah center frequency	0...100 ☞ Fx:09
f	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO	Auto, Dmod, LFO ☞ Fx:09, D-mod
	Src (Source) Selects the modulation source for the wah when Swp Mode=Dmod	Off...Tempo
g	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	Res (Resonance) Sets the resonance amount	0...100
	LPF (Low Pass Filter) Switches the wah low pass filter on and off	Of, On
h	[Routing] Switches the order of the compressor and wah connection	CMP → WAH, WAH → CMP
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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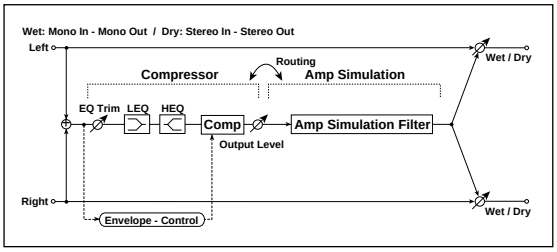
64: Comp–AmpSim

(Compressor – Amp Simulation)

This effect combines a mono-type compressor and an amp simulation. You can change the order of the effect connection.

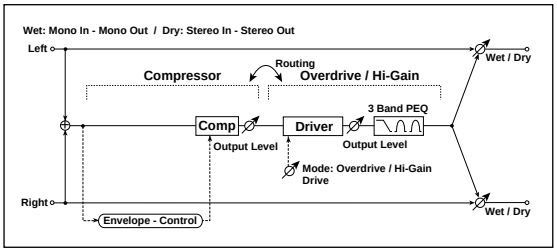


a	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
b	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
f	[Routing] Switches the order of the compressor and amp simulation connection	CMP → AMP, AMP → CMP
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

65: Comp–OD/HG

(Compressor – Overdrive/Hi.Gain)

This effect combines a mono-type compressor and an overdrive/high-gain distortion. You can change the order of the effect connection.

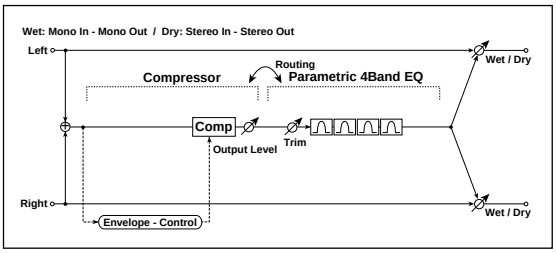


a	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
b	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
c	[OD] Mode (Drive Mode) Switches between overdrive and high-gain distortion	OverD, Hi-Gain
	Drive Sets the degree of distortion	1...100 ☞ Fx:06
d	Level (Output Level) Sets the overdrive output level	0...50 ☞ Fx:06, D-mod
	(Source) Selects the modulation source for the overdrive output level	Off...Tempo
	(Amount) Sets the modulation amount of the overdrive output level	–50...+50
e	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	G (Gain) Sets the gain of Low EQ	–18...+18dB
f	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 1	–18...+18dB
g	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 2	–18...+18dB
h	[Routing] Switches the order of the compressor and overdrive connection	CMP → OD, OD → CMP
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

66: Comp–P4EQ

(Compressor – Parametric 4-Band EQ)

This effect combines a mono-type compressor and a four-band parametric equalizer. You can change the order of the effect connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
b	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
c	[PEQ] Trim Sets the parametric EQ input level	0...100
d	[Routing] Switches the order of the compressor and parametric EQ connection	CMP → PEQ, PEQ → CMP
e	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18...+18dB
f	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18...+18dB

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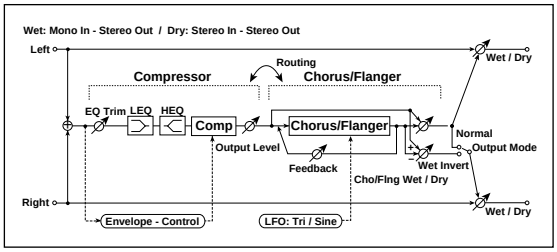
g	C/F W/D (Cho/Flng Wet/Dry) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18...+18dB
h	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18...+18dB
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

67: Comp–Cho / Fl

(Compressor – Chorus / Flanger)

This effect combines a mono-type compressor and a chorus / flanger. You can change the order of the effect connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
b	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	–100...+100 ☞ Fx:20
g	[F] Cho/Flng W/D Sets the effect balance of the chorus/flanger	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 20
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv ☞
h	[Routing] Switches the order of the compressor and chorus/flanger connection	CMP → CF/FL, CH/FL → CMP ☞
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

g: Out, h: [Routing]

When **Wet Inv** is selected, the right channel phase of the chorus / flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

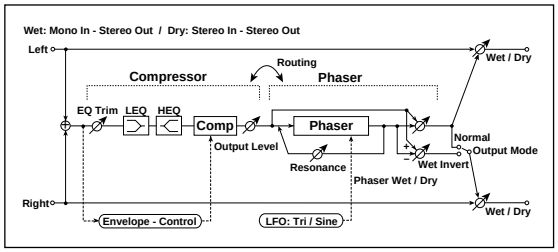
However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus / flanger effects.

When "[Routing]" is set to **CH/FL→CMP**, "Out" will be set to **Normal**.

68: Comp–Phaser

(Compressor – Phaser)

This effect combines a mono-type compressor and a phaser. You can change the order of the effect connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
b	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	–100...+100 ☞ Fx:23
g	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 23
	Out (Output Mode) Selects the phaser output mode	Normal, Wet Inv ☞ Fx:67
h	[Routing] Switches the order of the compressor and phaser connection	CMP→PHS, PHS→CMP ☞ Fx:67
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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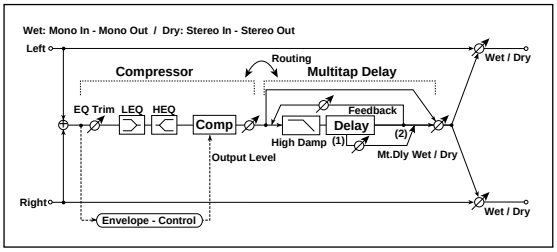
69: Comp–M.Dly

(Compressor – Multitap Delay)

This effect combines a mono-type compressor and a multitap delay. You can change the order of the effect connection.

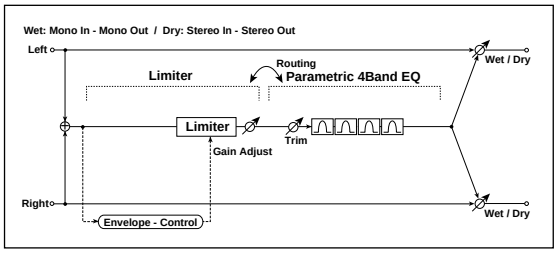


a	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
b	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680msec
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680msec
f	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 ☞ Fx:45
	T2 (Tap2 Delay) Sets the Tap2 feedback amount	–100...+100
g	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
h	[Routing] Switches the order of the compressor and multitap delay connection	CMP→DLY, DLY→CMP
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

70: Limit–P4EQ

(Limiter – Parametric 4-Band EQ)

This effect combines a mono-type limiter and a four-band parametric equalizer. You can change the order of the effect connection.



a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 ☞ Fx:03
b	Threshld (Threshold) Sets the level above which the compressor is applied	–40...0dB ☞ Fx:03
	G.Adj (Gain Adjust) Sets the limiter output gain	–Inf, –38...+24dB ☞ Fx:03
c	Attack Sets the attack time	1...100 ☞ Fx:03
	Release Sets the release time	1...100 ☞ Fx:03
d	[PEQ] Trim Sets the parametric EQ input level	0...100
e	[Routing] Switches the order of the limiter and parametric EQ connection	LMT→PEQ, PEQ→LMT
f	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 1	–18...+18dB
g	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 2	–18...+18dB
h	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 3	–18...+18dB
i	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Band 4	–18...+18dB
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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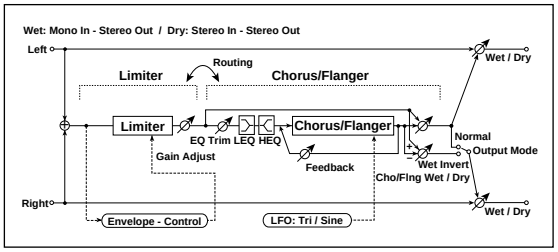
71: Limit–Cho / Fl

(Limiter – Chorus / Flanger)

This effect combines a mono-type limiter and a chorus / flanger. You can change the order of the effect connection.

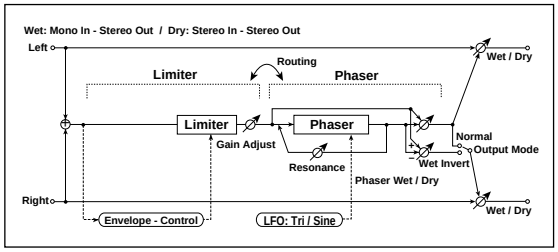


a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 ☞ Fx:03
b	Threshld (Threshold) Sets the level above which the compressor is applied	–40...0dB ☞ Fx:03
	G.Adj (Gain Adjust) Sets the limiter output gain	–Inf, –38...+24dB ☞ Fx:03
c	Attack Sets the attack time	1...100 ☞ Fx:03
	Release Sets the release time	1...100 ☞ Fx:03
d	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	–100...+100 ☞ Fx:20
f	[F] EQ Trim Sets the EQ input level	0...100
g	[F] Pre LEQ Gain [dB] Sets the gain of Low EQ	–15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	–15...+15dB
h	[F] Cho/Flng W/D Sets the effect balance of the chorus/flanger	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 20
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Inv ☞ Fx:67
i	Routing Switches the order of the limiter and chorus/flanger connection	LMT→CH/FL, CH/FL→LMT ☞ Fx:67
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

72: Limit–Phaser

(Limiter – Phaser)

This effect combines a mono-type limiter and a phaser. You can change the order of the effect connection.



a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 ☞ Fx:03
b	Threshld (Threshold) Sets the level above which the compressor is applied	–40...0dB ☞ Fx:03
	G.Adj (Gain Adjust) Sets the limiter output gain	–Inf, –38...+24dB ☞ Fx:03
c	Attack Sets the attack time	1...100 ☞ Fx:03
	Release Sets the release time	1...100 ☞ Fx:03
d	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	–100...+100 ☞ Fx:23
f	[P] Phaser W/D Sets the phaser effect balance	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 23
	Output Mode Selects the phaser output mode	Normal, Wet Inv ☞ Fx:67
g	Routing Switches the order of the limiter and phaser connection	LMT→PHS, PHS→LMT ☞ Fx:67
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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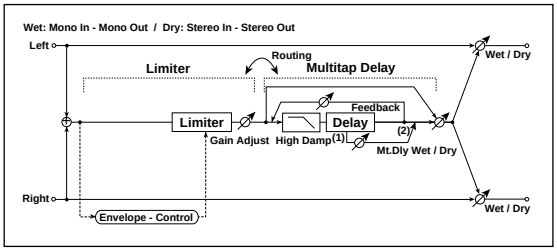
73: Limit–M.Dly

(Limiter – Multitap Delay)

This effect combines a mono-type limiter and a multitap delay. You can change the order of the effect connection.

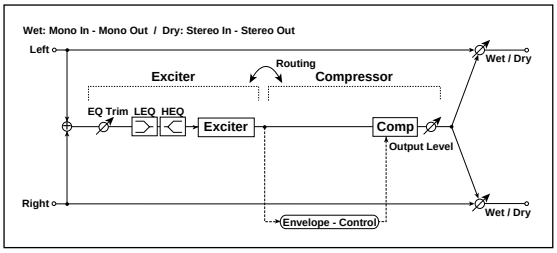


a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 ☞ Fx:03
b	Threshld (Threshold) Sets the level above which the compressor is applied	–40...0dB ☞ Fx:03
	G.Adj (Gain Adjust) Sets the limiter output gain	–Inf, –38...+24dB ☞ Fx:03
c	Attack Sets the attack time	1...100 ☞ Fx:03
	Release Sets the release time	1...100 ☞ Fx:03
d	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
e	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 ☞ Fx:45
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	–100...+100
f	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
g	[Routing] Switches the order of the limiter and multitap delay connection	LMT→DLY, DLY→LMT
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

74: Exct–Comp

(Exciter – Compressor)

This effect combines a mono-type exciter and a compressor. You can change the order of the effect connection.

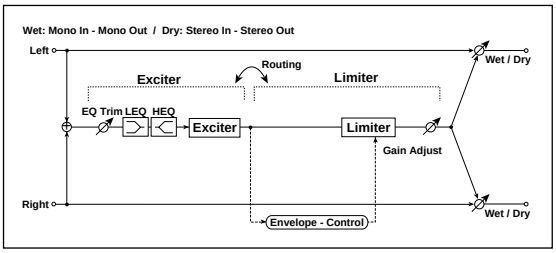


a	[XTC] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	–100...+100 ☞ Fx:11
b	Emphatic Point Sets the frequency range to be emphasized	0...70 ☞ Fx:11
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
f	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
g	[Routing] Switches the order of the exciter and compressor connection	XCT→CMP, CMP→XCT
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

75: Exct–Limiter

(Exciter – Limiter)

This effect combines a mono-type exciter and a limiter. You can change the order of the effect connection.



a	[XTC] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	–100...+100 ☞ Fx:11
b	Emphatic Point Sets the frequency range to be emphasized	0...70 ☞ Fx:11
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 ☞ Fx:03
f	Threshld (Threshold) Sets the level above which the compressor is applied	–40...0dB ☞ Fx:03
	G.Adj (Gain Adjust) Sets the limiter output gain	–Inf, –38...+24dB ☞ Fx:03
g	Attack Sets the attack time	1...100 ☞ Fx:03
	Release Sets the release time	1...100 ☞ Fx:03
h	[Routing] Switches the order of the exciter and limiter connection	XCT→LMT, LMT→XCT
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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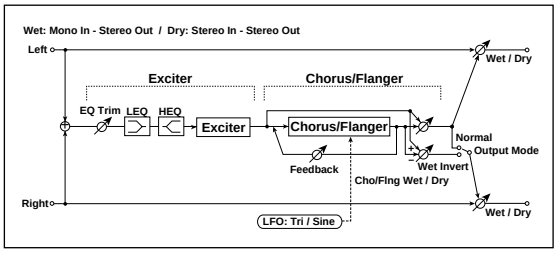
76: Exct–Cho / Fl

(Exciter – Chorus / Flanger)

This effect combines a mono-type limiter and a chorus / flanger.

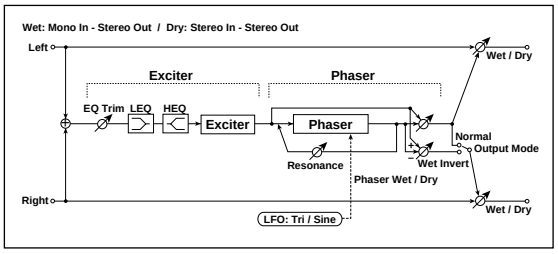


a	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	–100...+100 ☞ Fx:11
b	Emphatic Point Sets the frequency range to be emphasized	0...70 ☞ Fx:11
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	–100...+100 ☞ Fx:20
g	C/F W/D (Cho/Flng Wet/Dry) Sets the effect balance of the chorus/flanger	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 20
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv ☞ Fx:60
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

77: Exct–Phaser

(Exciter – Phaser)

This effect combines a mono-type limiter and a phaser.

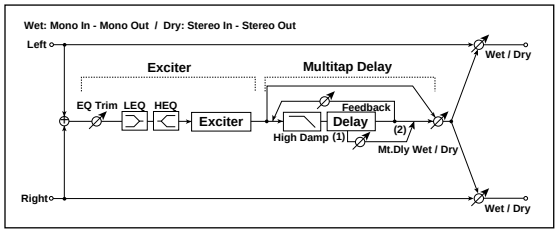


a	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	–100...+100 ☞ Fx:11
b	Emphatic Point Sets the frequency range to be emphasized	0...70 ☞ Fx:11
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	–100...+100 ☞ Fx:23
g	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 23
	Out (Output Mode) Selects the phaser output mode	Normal, Wet Inv ☞ Fx:60
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

78: Exct–M.Dly

(Exciter – Multitap Delay)

This effect combines a mono-type exciter and a multitap delay.



a	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	–100...+100 ☞ Fx:11
b	Emphatic Point Sets the frequency range to be emphasized	0...70 ☞ Fx:11
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
f	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 ☞ Fx:45
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	–100...+100
g	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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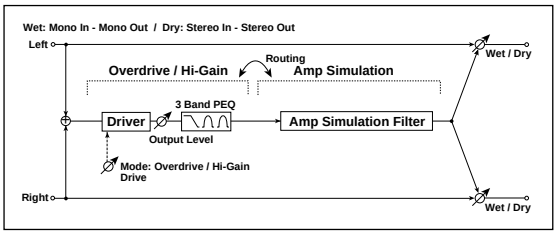
79: OD / HG–AmpSim

(Overdrive / Hi.Gain – Amp Simulation)

This effect combines a mono-type overdrive / high-gain distortion and an amp simulation. You can change the order of the effect connection.

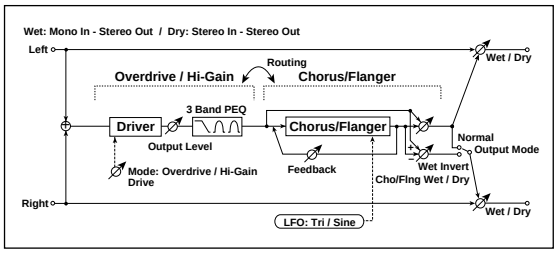


a	[OD] Mode (Drive Mode) Switches between overdrive and high-gain distortion	OverD, Hi-Gain
	Drive Sets the degree of distortion	1...100 ☞ Fx:06
b	Level (Output Level) Sets the overdrive output level	0...50 ☞ Fx:06, D-mod
	(Source) Selects the modulation source for the overdrive output level	Off...Tempo
	(Amount) Sets the modulation amount of the overdrive output level	–50...+50
c	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	G (Gain) Sets the gain of Low EQ	–18...+18dB
d	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 1	–18...+18dB
e	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 2	–18...+18dB
f	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
g	[Routing] Switches the order of the overdrive and amp simulation connection	OD→AMP, AMP→OD
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

80: OD / HG–Cho / Fl

(Overdrive / Hi.Gain – Chorus / Flanger)

This effect combines a mono-type overdrive / high-gain distortion and a chorus / flanger. You can change the order of the effect connection.



a	[OD] Mode (Drive Mode) Switches between overdrive and high-gain distortion	OverD, Hi-Gain
	Drive Sets the degree of distortion	1...100 ☞ Fx:06
b	Level (Output Level) Sets the overdrive output level	0...50 ☞ Fx:06, D-mod
	(Source) Selects the modulation source for the overdrive output level	Off...Tempo
	(Amount) Sets the modulation amount of the overdrive output level	–50...+50
c	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	G (Gain) Sets the gain of Low EQ	–18...+18dB
d	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 1	–18...+18dB
e	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 2	–18...+18dB
f	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
g	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	–100...+100 ☞ Fx:20
h	C/F W/D (Cho/Flng Wet/Dry) Sets the effect balance of the chorus/flanger	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 20
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv ☞ Fx:67
i	[Routing] Switches the order of the overdrive and chorus/flanger connection	OD → CH/FL, CH/FL → OD ☞ Fx:67
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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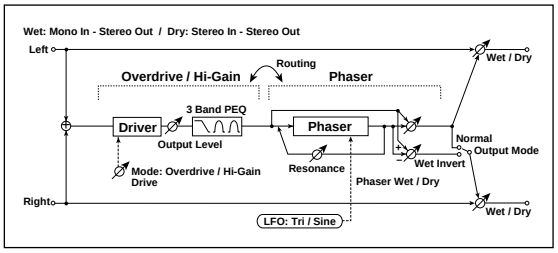
81: OD / HG–Phaser

(Overdrive / Hi.Gain – Phaser)

This effect combines a mono-type overdrive / high-gain distortion and a phaser. You can change the order of the effect connection.

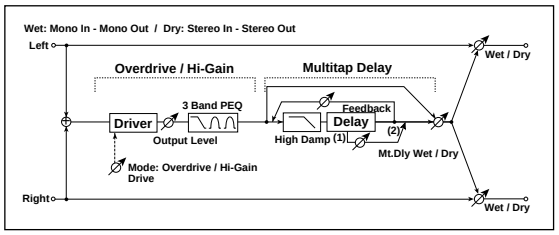


a	[OD] Mode (Drive Mode) Switches between overdrive and high-gain distortion	OverD, Hi-Gain
	Drive Sets the degree of distortion	1...100 ☞ Fx:06
b	Level (Output Level) Sets the overdrive output level	0...50 ☞ Fx:06, D-mod
	(Source) Selects the modulation source for the overdrive output level	Off...Tempo
	(Amount) Sets the modulation amount of the overdrive output level	–50...+50
c	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	G (Gain) Sets the gain of Low EQ	–18...+18dB
d	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 1	–18...+18dB
e	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 2	–18...+18dB
f	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
g	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	–100...+100 ☞ Fx:23
h	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 23
	Out (Output Mode) Selects the phaser output mode	Normal, Wet Inv ☞ Fx:67
i	[Routing] Switches the order of the overdrive and phaser connection	OD → PHS, PHS → OD ☞ Fx:67
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

82: OD / HG–M.Dly

(Overdrive / Hi.Gain – Multitap Delay)

This effect combines a mono-type overdrive / high-gain distortion and a multitap delay.



a	[OD] Mode (Drive Mode) Switches between overdrive and high-gain distortion	OverD, Hi-Gain
	Drive Sets the degree of distortion	1...100 ☞ Fx:06
b	Level (Output Level) Sets the overdrive output level	0...50 ☞ Fx:06, D-mod
	(Source) Selects the modulation source for the overdrive output level	Off...Tempo
	(Amount) Sets the modulation amount of the overdrive output level	–50...+50
c	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	G (Gain) Sets the gain of Low EQ	–18...+18dB
d	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 1	–18...+18dB
e	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 ☞ Fx:06
	G (Gain) Sets the gain of Mid/High EQ 2	–18...+18dB
f	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
g	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 ☞ Fx:45
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	–100...+100
h	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 2:98...98:2, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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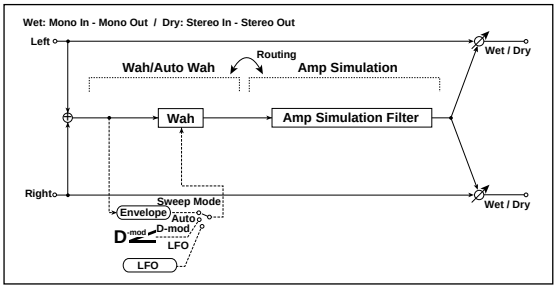
83: Wah–AmpSim

(Wah / Auto Wah – Amp Simulation)

This effect combines a mono-type wah and an amp simulation. You can change the order of the effect connection.

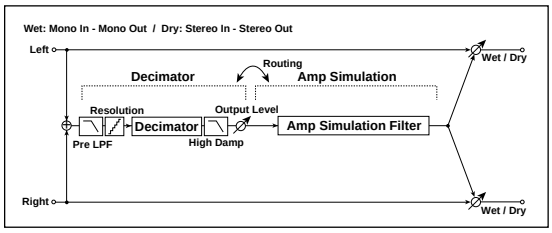


a	[WAH] Freq Btm (Frequency Bottom) Sets the lower limit of the wah center frequency	0...100 ☞ Fx:09
	Top (Frequency Top) Sets the upper limit of the wah center frequency	0...100 ☞ Fx:09
b	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO	Auto, Dmod, LFO ☞ Fx:09, D-mod
	Src (Source) Selects the modulation source for the wah when Swp Mode=Dmod	Off...Tempo
c	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
d	Resonance Sets the resonance amount	0...100
	LPF (Low Pass Filter) Switches the wah low pass filter on and off	Off, On
e	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
f	[Routing] Switches the order of the wah and amp simulation connection	WAH → AMP, AMP → WAH
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

84: Deci–AmpSim

(Decimator – Amp Simulation)

This effect combines a mono-type decimator and an amp simulation. You can change the order of the effect connection.

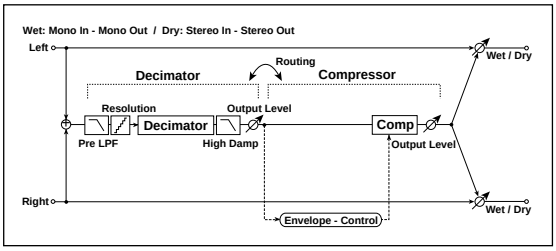


a	[DECI] Pre LPF Turn the harmonic noise caused by lowered sampling on and off	Off, On ☞ Fx:14
b	High Damp Sets the ratio of high-range damping	0...100%
c	Sampling Freq (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz
d	Resolution Sets the data bit length	4...24 ☞ Fx:14
e	Level (Output Level) Sets the decimator output level	0...100 ☞ Fx:14
f	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
g	[Routing] Switches the order of the wah and amp simulation connection	DECI→AMP, AMP→DECI
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

85: Deci–Comp

(Decimator – Compressor)

This effect combines a mono-type decimator and a compressor. You can change the order of the effect connection.



a	[DECI] Pre LPF Turn the harmonic noise caused by lowered sampling on and off	Off, On ☞ Fx:14
	High Damp Sets the ratio of high-range damping	0...100%
b	Sampling Freq (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz
c	Resolution Sets the data bit length	4...24 ☞ Fx:14
d	Level (Output Level) Sets the decimator output level	0...100 ☞ Fx:14
e	[CMP] Sensitivity Sets the sensitivity	1...100 ☞ Fx:02
f	Attack Sets the attack level	1...100 ☞ Fx:02
	Level (Output Level) Sets the compressor output level	0...100 ☞ Fx:02
g	[Routing] Switches the order of the decimator and compressor connection	DECI→CMP, CMP→DECI
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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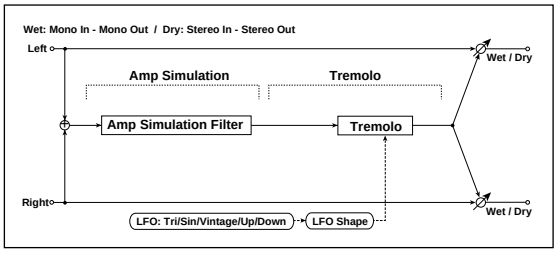
86: AmpSim–Trml

(Amp Simulation – Tremolo)

This effect combines a mono-type amp simulation and a tremolo.

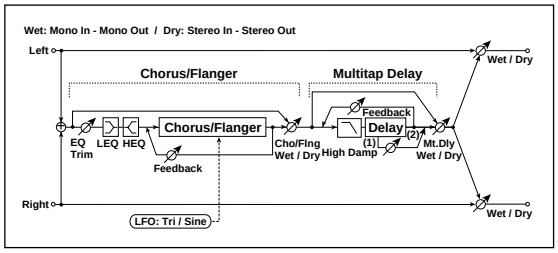


a	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
b	[TRML] LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine, Vintage, Up, Down ☞ Fx:32
c	LFO Shape Determines how much the LFO waveform is changed	–100...+100 ☞ Fx:20
d	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Depth Sets the depth of LFO modulation	0...100
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

87: Cho / Fl–M.Dly

(Chorus / Flanger – Multitap Delay)

This effect combines a mono-type chorus / flanger and a multitap delay.



a	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
b	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	–100...+100 ☞ Fx:20
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	C/F W/D (Cho/Flng Wet/Dry) Sets the effect balance of the chorus/flanger	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 20
f	[DLY]T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
g	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 ☞ Fx:45
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	–100...+100
h	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% ☞ Fx:43
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

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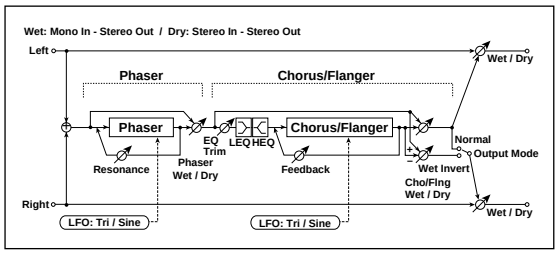
88: Phasr–Cho / Fl

(Phaser – Chorus / Flanger)

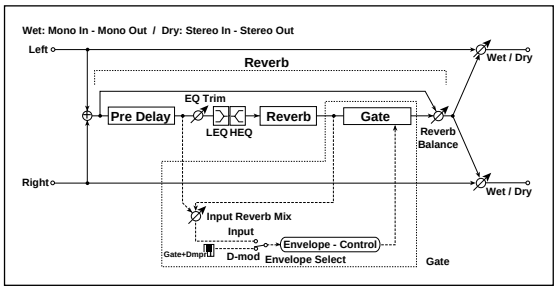
This effect combines a mono-type phaser and a chorus / flanger.



a	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
b	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	–100...+100 ☞ Fx:23
c	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 23
d	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	–100...+100 ☞ Fx:20
f	Pre EQ Trim Sets the EQ input level	0...100
g	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
h	C/F W/D (Cho/Flng Wet/Dry) Sets the effect balance of the chorus/flanger	–Wet...–2:98, Dry, 2:98...Wet ☞ Fx:10, 20
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv ☞ Fx:60
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

89: Reverb–Gate

This effect combines a mono-type reverb and a gate.



a	[REV] Reverb Time Sets the reverberation time	0.1...10.0sec
b	HiDamp (High Damp) Sets the damping amount in the high range	0...100%
	Pre Dly (Pre Delay) Sets the delay time of the reverb sound and gate control signal	0...200ms
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	–15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	–15...+15dB
e	Rev Balance (Reverb Balance) Sets the reverb effect balance	Dry, 1:99...99:1, Wet
f	[GATE] In Rev Mix (Input Reverb Mix) Sets the balance between the dry and reverb sounds of the gate control signal. ☞	Dry, 1:99...99:1, Wet
g	Envelope (Envelope Select) Switches between modulation source control and input signal control ☞	Dmod, Input
	Src (Source) Selects the modulation source that controls the gate when Envelope is set to Dmod ☞	Off...G2+Dmp
h	Threshold Sets the gate threshold level ☞	0...100
	Polarity Switches between non-invert and invert of the gate on/off state ☞ Fx:05	+, –
i	Attack Sets the attack time ☞ Fx:05	1...100
	Release Sets the release time ☞ Fx:05	1...100
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	–100...+100

g: Envelope, g:Src, f: In Rev Mix, h: Threshold

The “Envelope” parameter enables you to select whether turning the gate on and off is triggered by the input signal level or controlled directly by the modulation source. You can select from **Off** to **G2+Dmp** for the Source parameter to specify the modulation source.

When “Envelope” is set to **Input**, the gate is controlled by the level of signals that are the combination of the dry sound and the reverb sound. When the signal level exceeds the threshold, the gate opens and the reverb sound is output.

Normally, set “In Rev Mix” to **Dry** (the gate is controlled only by the dry sound). If you wish to extend the gate time, set the “In Rev Mix” value higher and adjust the “Threshold” value.

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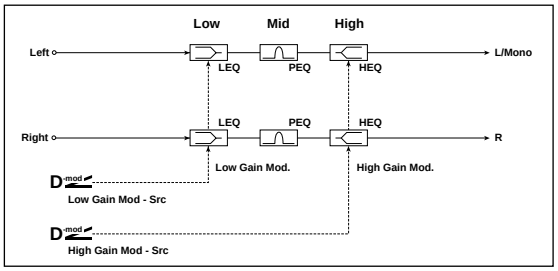
Master EQ

Use 7.2: MasterFX MEQ page in Program, Combination modes and 7.2: Master FX MEQ page in Sequencer mode.

You cannot use the Master EQ in Sampling mode.

You cannot use the Master EQ for the Insert Effect or Master Effects.



a	Low Cutoff Sets the cutoff frequency of Low EQ (shelving type)	20...1.00KHz
	Gain Sets the gain of Low EQ	–18.0...+18.0 (0.5step)dB D mod
b	Mid Cutoff Sets the cutoff frequency of Mid EQ (peaking type)	300...10.00KHz
	Q Sets the band width of Mid EQ. With a higher value, the band become narrower.	0.5...10.0 (0.1step)
	Gain Sets the gain of Mid EQ	–18.0...+18.0 (0.5step)dB
c	High Cutoff Sets the cutoff frequency of High EQ (shelving type)	500...20.00KHz
	Gain Sets the gain of High EQ	–18.0...+18.0 (0.5step)dB D mod
d	Low Gain Mod-Src Selects the modulation source for Low Gain	Off...Tempo
e	High Gain Mod-Src Selects the modulation source for High Gain	Off...Tempo

a: Gain, b: Gain, c: Gain

These parameters are linked with the “Master EQ Gain [dB]” (7.2–1c) parameter of the Master FX.

d: Low Gain Mod-Src

For example, when this parameter is set to **Kb1#17**, you can control the EQ gain in the range from –18dB to +18dB during performance using the [REALTIME CONTROLS] knob. At this time, set Knob 1-B to **Knob Mod1 (CC#17)** for “Knob B-Assign” (Program, Combination, Sequencer 2.2–1a). The 12 o’clock position of the knob corresponds to the “Low Gain” value here.

e: High Gain Mod-Src

For example, when this parameter is set to **Kb2#19**, you can control the EQ gain in the range from –18dB to +18dB during performance using the [REALTIME CONTROLS] knob. At this time, set Knob 2-B to **Knob Mod2 (CC#19)** for “Knob B-Assign” (Program, Combination, Sequencer 2.2–1a). The 12 o’clock position of the knob corresponds to the High Gain value here.

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8. Appendices

Alternate Modulation Source (AMS)

About Alternate Modulation

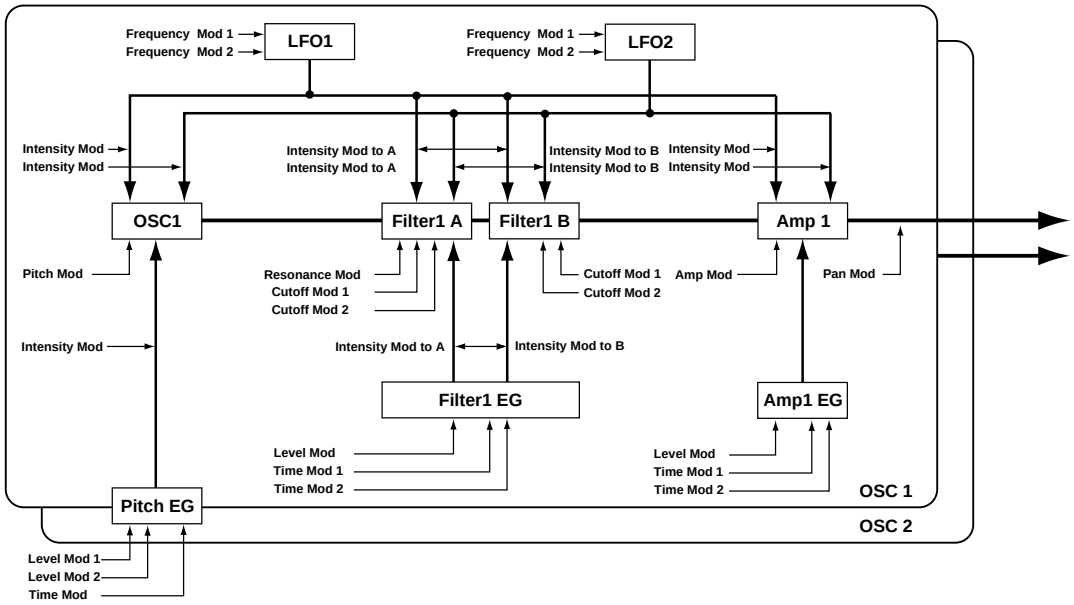
Alternate Modulation can be specified for the following 55 alternate modulation destinations shown in the diagram below. (Pitch EG is common to OSC 1 and 2.)
The AMS (Alternate Modulation Source) and amount can be selected independently to apply modulation to each of these destinations.

About Alternate Modulation Sources

There are 42 Alternate Modulation sources (AMS) that can control Alternate Modulation destinations.
If you select two or more Alternate Modulation destinations for control by the same AMS, a single source will apply modulation to each of the specified destinations.

Frequently used assignments such as using the joystick (X) to control pitch are provided as special parameters, so it is not necessary to use Alternate Modulation to accomplish this.

Alternate Modulation



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AMS (Alternate Modulation Source) List

Off		do not use Alternate Modulation	
(PEG)	Pitch EG	pitch EG	
(FEG)	Filter EG	filter EG within the same oscillator	
(AEG)	Amp EG	amp EG within the same oscillator	
(LFO)	LFO1	LFO1 within the same oscillator	
(LFO)	LFO2	LFO2 within the same oscillator	
(KT)	Flt KT +/+ (Filter Keyboard Track +/+)	filter keyboard tracking within the same oscillator	(☞p.213)
(KT)	Flt KT +/– (Filter Keyboard Track +/–)	filter keyboard tracking within the same oscillator	(☞p.213)
(KT)	Flt KT 0/+ (Filter Keyboard Track 0/+)	filter keyboard tracking within the same oscillator	(☞p.213)
(KT)	Flt KT +/0 (Filter Keyboard Track +/0)	filter keyboard tracking within the same oscillator	(☞p.213)
(KT)	Amp KT +/+ (Amp Keyboard Track +/+)	amp keyboard tracking within the same oscillator	(☞p.213)
(KT)	Amp KT +/– (Amp Keyboard Track +/–)	amp keyboard tracking within the same oscillator	(☞p.213)
(KT)	Amp KT 0/+ (Amp Keyboard Track 0/+)	amp keyboard tracking within the same oscillator	(☞p.213)
(KT)	Amp KT +/0 (Amp Keyboard Track +/0)	amp keyboard tracking within the same oscillator	(☞p.213)
(KT)	Note No. (Note Number)	note number	
(EXT)	Velocity	velocity	
(EXT)	Poly After (Poly After Touch)	polyphonic after touch (transmitted from this instrument only as sequence data)	
(EXT)	AfterT (After Touch)	after touch (channel after touch)	
(EXT)	JS X (Joy Stick X)	joystick X (horizontal) axis	
(EXT)	JS+Y #01 (Joy Stick +Y: CC#01)	joystick +Y (vertical upward) direction (CC#01)	
(EXT)	JS–Y #02 (Joy Stick –Y: CC#02)	joystick –Y (vertical downward) direction (CC#02)	
(EXT)	JS+Y&AT/2 (Joy Stick +Y & After Touch/2)	joystick +Y (vertical upward) direction and after touch	(☞p.213)
(EXT)	JS–Y&AT/2 (Joy Stick –Y & After Touch/2)	joystick –Y (vertical downward) direction and after touch	(☞p.213)
(EXT)	Pedal #04 (Foot Pedal: CC#04)	assignable foot pedal (CC#04)	(☞p.213)
(EXT)	Ribbon #16 (Ribbon: CC#16)	MIDI CC#16: controller (ribbon controller*)	
(EXT)	Slider #18 (Value Slider: CC#18)	MIDI CC#18: Controller (Value Slider*)	
(EXT)	KnobM1#17 (Knob Mod1: CC#17)	realtime control knob 1 in B-mode (knob modulation 1 CC#17)	(☞p.213)
(EXT)	KnobM2#19 (Knob Mod2: CC#19)	realtime control knob 2 in B-mode (knob modulation 2 CC#19)	(☞p.213)
(EXT)	KnobM3#20 (Knob Mod3: CC#20)	realtime control knob 3 in B-mode (knob modulation 3 CC#20)	(☞p.213)
(EXT)	KnobM4#21 (Knob Mod4: CC#21)	realtime control knob 4 in B-mode (knob modulation 4 CC#21)	(☞p.213)
(EXT)	KnobM1 [+] (Knob Mod1: CC#17 [+])	realtime control knob 1 in B-mode [+]	(☞p.213)
(EXT)	KnobM2 [+] (Knob Mod2: CC#19 [+])	realtime control knob 2 in B-mode [+]	(☞p.213)
(EXT)	KnobM3 [+] (Knob Mod3: CC#20 [+])	realtime control knob 3 in B-mode [+]	(☞p.213)
(EXT)	KnobM4 [+] (Knob Mod4: CC#21 [+])	realtime control knob 4 in B-mode [+]	(☞p.213)
(EXT)	Damper#64 (Damper: CC#64)	damper pedal (CC#64)	
(EXT)	Prta.SW#65 (Portamento Switch: CC#65)	portamento switch (CC#65)	
(EXT)	Soste.#66 (Sosutenuto: CC#66)	sostenuto pedal (CC#66)	
(EXT)	Soft #67 (Soft Pedal: CC#67)	soft pedal (CC#67)	
(EXT)	SW 1 #80 (SW1 Mod.: CC#80)	Assignable switch 1 (SW1 modulation CC#80)	(☞p.213)
(EXT)	SW 2 #81 (SW2 Mod.: CC#81)	Assignable switch 2 (SW2 modulation CC#81)	(☞p.213)
(EXT)	FootSW#82 (Foot Switch: CC#82)	assignable foot switch (CC#82)	(☞p.213)
(EXT)	MIDI CC#83	MIDI control change (CC#83)	
(EXT)	Tempo	tempo (tempo data from internal clock or external MIDI clock)	

In the above table, the parentheses ( ) indicate the type of source that can be used for each AMS.
For example, the "AMS (Pitch AMS)" value for OSC1 Pitch (PROG 3.1–1a) can be [Off, (FEG, AEG, EXT)] (☞p.10). This means that you can select Off, and (FEG), (AEG), or (EXT) sources.

CC#: This is the control change number.

*: This indicates a controller or a function assigned to a controller on the TRITON / TRITONpro / TRITONproX. The controller and the type of MIDI messages it transmits will depend on the type of connected MIDI instrument.

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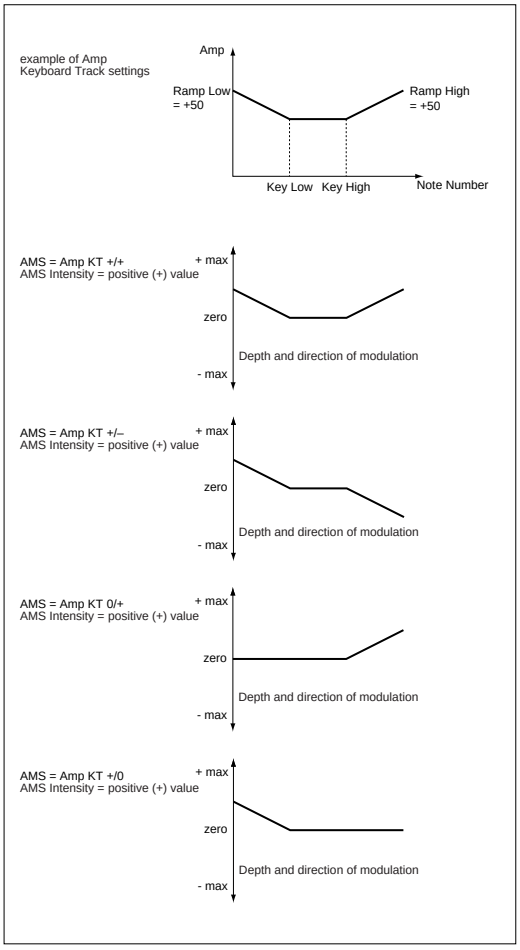
Flt KT +/+ (Filter Keyboard Track +/+)
Flt KT +/– (Filter Keyboard Track +/–)
Flt KT 0/+ (Filter Keyboard Track 0/+)
Flt KT +/0 (Filter Keyboard Track +/0)
Amp KT +/+ (Amp Keyboard Track +/+)
Amp KT +/– (Amp Keyboard Track +/–)
Amp KT 0/+ (Amp Keyboard Track 0/+)
Amp KT +/0 (Amp Keyboard Track +/0)
+/+: The direction of the effect will be determined by the sign (positive or negative) of the "Ramp Low" or "Ramp High" setting.
+/–: The direction of the effect will be determined by the sign of the "Ramp Low" setting, and by the opposite sign of the "Ramp High" setting (**–50** for a setting of **+50**, and **+50** for a setting of **–50**).
0/+: "Ramp Low" will have no AMS effect. The sign of the "Ramp High" setting will determine the direction of its effect.
+/0: The sign of the "Ramp Low" setting will determine the direction of its effect. "Ramp High" will have no AMS effect.



JS+Y&AT/2 (Joy Stick +Y & After Touch/2)
The effect will be controlled by the joystick +Y (vertically upward) and by after touch. In this case, the effect of after touch will be only half of the specified intensity.

JS-Y&AT/2 (Joy Stick-Y & After Touch/2)
The effect will be controlled by the joystick –Y (vertically downward) and by after touch. In this case, the effect of after touch will be only half of the specified intensity.

Pedal #04 (Foot Pedal: CC#04)
If you wish to use the assignable foot pedal as an AMS, set "Foot Pedal Assign" (GLOBAL 1.1–3a) to **Foot Pedal (CC#04)** (☞p.223 "Foot Pedal Assign").
A foot controller etc. connected to the ASSIGNABLE PEDAL jack will control the effect.

KnobM1#17 (Knob Mod1: CC#17)
KnobM2#19 (Knob Mod2: CC#19)
KnobM3#20 (Knob Mod3: CC#20)
KnobM4#21 (Knob Mod4: CC#21)
If you wish to use a REALTIME CONTROLS knob [1]–[4] as an AMS, make settings in program, combination, or song to set the Ctrls tab parameter "Knobs B Assign" to the following settings respectively: "Knob1-B" to **Knob Mod.1 (CC#17)**, "Knob2-B" to **Knob Mod.2 (CC#19)**, "Knob3–B" to **Knob Mod.3 (CC#20)**, or "Knob4-B" to **Knob Mod.4 (CC#21)**. (☞p.221 "Knob 1...4 B Assign")
When you set REALTIME CONTROLS to B-mode and operate knobs [1]–[4], the specified modulation will apply.
If AMS intensity is set to a **positive (+)** value, moving the knob to the 12 o'clock position will produce an AMS effect of 0. Rotating the knob toward the right will produce a positive change in the effect, and rotating it toward the left will produce a negative change. (With **negative (–)** settings, the opposite effect will result.)

KnobM1 [+] (Knob Mod1: CC#17 [+])
KnobM2 [+] (Knob Mod2: CC#19 [+])
KnobM3 [+] (Knob Mod3: CC#20 [+])
KnobM4 [+] (Knob Mod4: CC#21 [+])
These differ from **KnobM1#17**–**KnobM4#21** in the knob position and direction of the effect. If AMS intensity is set to a **positive (+)** value, rotating the knob to the far left will produce an AMS effect of **0**. Rotating the knob toward the right will apply an effect only in the positive direction. (With **negative (–)** settings, the opposite effect will result.)

SW 1 #80 (SW1 Mod.: CC#80)
SW 2 #81 (SW2 Mod.: CC#81)
If you wish to use the [SW1] or[SW2] key as an AMS, make settings in program, combination, or song to set the Ctrls page parameter "SW1/2 Assign" to the following values respectively: "SW1" to **SW1 Mod.(CC#80)**, or "SW2" to **SW2 Mod.(CC#81)** (☞p.220 "SW1/2 Assign").
These are controlled by the [SW1] or [SW2] keys.

Foot SW #82 (Foot Switch: CC#82)
If you wish to use an assignable foot switch as an AMS, set "Foot SW Assign" (GLOBAL 1.1–3a) to **Foot SW (CC#82)** (☞p.222 "Foot Switch Assign").
The effect will be controlled when you operate a foot switch etc. connected to the ASSIGNABLE SWITCH jack.

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Alternate Modulation settings

When you operate an AMS (Alternate Modulation Source), the modulation destination will be affected as shown in the table below.

By using alternate modulation, you can create complex systems of modulation in which EG, LFO, keyboard tracks, and controllers work together.

- You can apply complex change to an LFO or EG, for example by using the pitch / filter / amp EG to control the frequency or intensity of an LFO that modulates the pitch / filter / amp, or by using LFO2 to control the frequency of LFO1.
- The tone, EG, and LFO etc. can be controlled not only by velocity or joystick, but also from a switch, knob, or pedal etc.
- Panning can be controlled in realtime from a controller, EG, or LFO etc.
- The filter EG can also be used to control pitch or volume at the same time as it controls the filter.
- Controllers etc. can be used to control EG levels or times. This lets you shape the EG in realtime.
- Filter / amp keyboard tracking or note number can be used to control the EG or LFO according to the keyboard pitch that is played.
- Pitch, tone, EG or LFO can be controlled by the tempo of the arpeggiator or sequencer.

Notes for the table on the lower right

***1** If **Note No.** is selected as an "AMS," the base value will be **C4**.

***2** EXT(+) : Velocity, Poly After, AfterT, JS+Y #01, JS–Y #02, JS+Y&AT / 2, JS –Y&AT / 2, Pedal #04, Slider #18, KnobM1[+], KnobM2[+], KnobM3[+], KnobM4[+], Damper #64, Porta.SW #65, Soste. #66, Soft #67, SW 1 #80, SW 2 #81, MIDI CC#83

***3** EXT(+–): KnobM1 #17, KnobM2 #19, KnobM3 #20, KnobM4 #21

***4** If **Tempo** is selected as an AMS, the base value will be ♩ **=120**. For example if the AMS for "Pitch" is set to **Tempo**, and "AMS Intensity" is set to **12.00**, doubling the tempo value (♩=120 → 240) will raise the pitch one octave, and halving the tempo (♩=120 → 60) will lower the pitch one octave.

***5** A dedicated parameter is also provided.

***6** This will be added to the "Filter Frequency" value. As the "Filter Frequency" value increases by **10**, the cutoff frequency will double (rise one octave).

***7** This will be added to the "Pan" setting.

***8** It is possible to control LFO "Frequency" by using **Tempo** and "AMS Intensity." However if you use the "Sync. (MIDI / Tempo Sync.)" function (PROG 5.3–1c), the LFO frequency can be synchronized to the tempo and note value.

The effect of alternate modulation on various parameters, and example applications

Pitch (PROG 3.1–1a)

Pitch can be controlled by the filter / amp EG, controllers, or tempo etc.

- If you select **Filter EG** or **Amp EG** as the "AMS (Pitch AMS)" and set "Intensity (AMS Intensity)" to **+12.00**, the pitch will change up to ±1 octave in synchronization with the EG.
- If you select **Tempo** as the "AMS (Pitch AMS)" and set "Intensity (AMS Intensity)" to **+12.00**, doubling the tempo (based on ♩=120) will raise the pitch one octave, and halving the tempo will lower the pitch one octave.

Pitch EG Intensity (PROG 3.1–1b)

Pitch EG intensity can be controlled by keyboard tracking, controllers, or tempo.

- If you select **JS+Y#01** as the "AMS (Pitch EG AMS)" and set "Intensity (AMS Intensity)" to **+12.00**, moving the joystick, in the +Y direction will gradually increase the effect of the Pitch EG to a maximum of ±1 octave. If "Intensity (AMS Intensity)" has a **negative value**, the effect of the Pitch EG will be inverted.

Pitch LFO1 / 2 Intensity (PROG 3.1–2a, 3.1–4)

Pitch modulation intensity of the LFO1 / 2 can be controlled by an EG, keyboard tracking, controllers, or tempo etc.

- If you select **EG** as the "AMS (LFO1 / 2 AMS)," the pitch change width of LFO modulation etc. can be controlled in synchronization with the level changes of the EG. With **positive (+)** settings of "Intensity (AMS Intensity)," the vibrato effect will gradually deepen as the EG level rises, or gradually lessen as the EG level decreases. With **negative (–)** settings of "Intensity (AMS Intensity)," the LFO phase will be inverted.
- If you select a controller such as **SW1** or **2** as the "AMS (LFO 1 / 2 AMS)," you can press the "SW1" or "SW2" button when desired to turn on the vibrato effect.

Filter (Cutoff) Frequency (PROG 4.1–3a, 4.1–3b)

The cutoff frequency of filter A / B can be controlled by the pitch / amp EG, controllers, or tempo. Set "AMS 1 / 2 (Filter A / B AMS1 / 2)" and "AMS 1 / 2 Intensity" for Filter A or B.

- If you set "AMS1 (Filter A AMS1)" to **JS X**, and set "Intensity (A AMS1 Intensity)" to a **positive (+) value**, moving the joystick toward the right will raise the cutoff frequency, and moving it toward the left will lower the cutoff frequency. **Negative (–)** settings will have the opposite result.

Parameter	AMS → AMS Value → AMS Intensity	PEG/FEG –99...0...+99	AEG 0...+99
Pitch	(+12.00)	–1...0...+1[Octave]	0...+1[Octave]
Pitch EG Int.	(+12.00)	–	–
Pitch LFO1/2 Int.	(+12.00)	–1...0...+1[Octave]	0...+1[Octave]
Filter Frequency *6	(+99)	–99...0...+99	0...+99
Resonance	(+99)	–99...0...+99	0...+99
Filter EG Int.	(+99)	–	–
Filter LFO1/2 Int.	(+99)	–99...0...+99	0...+99
Amp	(+99)	value x(0...1...8)	–
Amp LFO1/2 Int.	(+99)	–99...0...+99	0...+99
Pan *7	(+50)	–63...0...+63	0...+63
EG Level	(+66)	–	–
EG Time	(+49)	–	–
LFO Frequency	(+99)	value x(1/64...1...64)	value x(1...64)

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- If you select the same controller for “AMS” and set the Filter A (Low Pass Filter) “Intensity (A AMS 1/2 Intensity)” parameter and Filter B (High Pass Filter) “Intensity (B AMS 1/2 Intensity)” parameter to different values, a single controller operation will simultaneously control the cutoff frequencies of the two filters.

Resonance (PROG 4.1–1b)

This can be used when the “Type (Filter1/2 Type)” is **Low Pass Resonance**. The resonance level can be controlled by EG, LFO, keyboard tracking, controllers or tempo etc.

- If you select **Filter KT** or **Amp KT** as the “Reso.AMS (Resonance AMS),” you can use the filter or amp keyboard tracking settings to control the resonance level. For example if the amp keyboard tracking parameters “Low (KBDTrk Ramp Low)” and “High (KBDTrk Ramp High)” are set to **positive (+)** values, **Amp KT +/+** is selected as the “Reso.AMS (Resonance AMS),” and “Intensity (AMS Intensity)” it set to a **positive (+)** value, playing toward either end of the keyboard will cause amp keyboard tracking to increase the volume, and “Reso.AMS (Resonance AMS)” to raise the resonance level.
- You can select a controller as the “Reso.AMS (Resonance AMS),” and apply resonance when desired by operating the controller.
- You can select LFO1 or 2 as the “Reso.AMS (Resonance AMS),” and use the LFO to modulate the resonance level.

Filter EG Intensity (PROG 4.1–2b)

Filter EG intensity can be controlled by a controller or tempo etc. You can use “Int. to A (AMS Int. to A)” and “Int. to B (AMS Int. to B)” to independently specify the intensity for Filter A and B.

- If you select **JS–Y#02** as the “AMS (Filter EG AMS)” and set “Int. to A/B (AMS Int. to A/B)” to a **positive (+)** value, moving the joystick, such as this instrument, in the –Y direction will gradually increase the effect of the Filter EG. If you set “Int. to A/B (AMS Int. to A/B)” to a **negative (–)** value, the effect of the Filter EG will be inverted.
- If you select **Ribbon#16** as the “AMS (Filter EG AMS)” and set “Int. to A/B (AMS Int. to A/B)” to a **positive (+)** value, operating the ribbon controller on a connected MIDI instrument, such as the TRITON, toward the right will gradually increase the effect of the Filter EG. Operating the ribbon controller on a connected MIDI instrument, such as the TRITON, toward the left will gradually increase the effect of the Filter EG with an inverted phase.

Filter LFO 1/2 Intensity (PROG 4.1–4a)

The LFO 1/2 filter modulation intensity can be controlled by EG, keyboard tracking, controller, or tempo. You can use “Int. to A (LFO1/2 AMS Int. to A)” and “Int. to B (LFO1/2 AMS Int. to B)” to independently specify the intensity for Filter A and B.

- If you select **EG** as the “AMS (LFO1/2 AMS),” the auto-wah effect produced by LFO modulation will be controlled by the changes in EG level. If you set “Int. to A (LFO1/2 AMS Int. to A)”/“Int. to B (LFO1/2 AMS Int. to B)” to a **positive (+)** value, the wah effect will deepen as the EG level rises, and will lessen as the EG level falls. With **negative (–)** values of “Int. to A (LFO1/2 AMS Int. to A)”/“Int. to B (LFO1/2 AMS Int. to B),” the phase of the LFO will be inverted.
- If you use a controller such as **SW1** or **2** as the “AMS (LFO1/2 AMS),” you can apply the auto-wah effect when desired by pressing the [SW1] or [SW2] key.

Amp (PROG 5.1–2b)

The volume can be controlled by the pitch/filter EG, controllers, or tempo etc.

- If an EG or controller that changes with a **positive (+)** value (**Amp EG**, **EXT(+)**, **EXT(SW)**) is selected as the “AMS (Amp AMS),” setting the “Int (AMS Intensity)” to **+99** will allow you to increase the volume to a maximum of eight times that of the current volume.
- If an EG, LFO, or controller that changes with a **± value** (**Pitch EG**, **Filter EG**, **LFO**, **KT**, **EXT(+–)** is selected as the “AMS (Amp AMS),” setting the “Int (AMS Intensity)” to **+99** will allow you to increase the volume to a maximum of eight times that of the current volume (for positive (+) changes of the AMS), or to decrease the volume to zero (for negative (–) changes of the AMS).
- In addition to the time-variant changes in volume produced by the amp EG, you can also make the volume change in synchronization with the pitch/filter EG. Select **PitchEG** or **FilterEG** as the “AMS (Amp AMS),” and adjust “Int (AMS Intensity).” If you wish to cancel the effect of the AmpEG and use the pitch/filter EG to control the volume, set all levels of the AmpEG to **+99**.

LFO1/2 –99...0...+99	KT(Flt KT, Amp KT) –99...0...+99	KT(Note No.) *1 ...36(C2)...60(C4)...84(C6) ...	JS X/Ribbon#16 –Max...0...+Max	EXT(+) *2 0...127	EXT(+–) *3 –Max...0...+Max	EXT(Tempo) *4 (♩) = ...60...120...240...
dedicated parameter – –	–1...0...+1[Octave] –1...0...+1[Octave] –1...0...+1[Octave]	dedicated parameter ...–1...0...+1...[Octave] ...–1...0...+1...[Octave]	–1...0...+1[Octave] *5 –1...0...+1[Octave] –1...0...+1[Octave]	0...+1[Octave] 0...+1[Octave] 0...+1[Octave]	–1...0...+1[Octave] –1...0...+1[Octave] –1...0...+1[Octave]	...–1...0...+1...[Octave] ...–1...0...+1...[Octave] ...–1...0...+1...[Octave]
dedicated parameter –99x2...0...+99x2 – –	– –99...0...+99 – –99...0...+99	– ...–99...0...+99... – ...–99...0...+99...	–99...0...+99 –99...0...+99 –99...0...+99 –99...0...+99	0...+99 0...+99 0...+99 0...+99	–99...0...+99 –99...0...+99 –99...0...+99 –99...0...+99	...–99...0...+99... ...–99...0...+99... ...–99...0...+99... ...–99...0...+99...
dedicated parameter – –127...0...+127	– –99...0...+99 –63...0...+63	– ...–99...0...+99... ...–63...0...+63...	value x(0...1...8) –99...0...+99 –63...0...+63	value x(1...8) 0...+99 0...+63	value x(0...1...8) –99...0...+99 –63...0...+63	value x(0...1...8...) ...–99...0...+99... ...–63...0...+63...
– – value x(1/128...1...128)	–99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	–99...0...+99 value x(...1/64...1...64...) value x(...1/64...1...64...)	–99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	0...+99 value x(1...64) value x(1...64)	–99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	–99...0...+99 value x(...1/64...1...64...) value x(...1/64...1...64...) *8

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Amp LFO 1/2 Intensity (PROG 5.1–2b, 5.2)

The amp modulation intensity of LFO 1/2 can be controlled by EG, keyboard tracking, controllers, or tempo etc.

- If you select **EG** as the "AMS (LFO1/2 AMS)," the depth of the tremolo effect produced by LFO modulation will change in synchronization with the changes in EG level. If you set "Int. (AMS Intensity)" to a **positive (+)** value, the tremolo effect will deepen as the EG level rises, and lessen as the EG level falls. If "Int. (AMS Intensity)" is set to a **negative (–)** value, the phase of the LFO will be inverted.
- If select a controller such as **SW1** or **2** as the "AMS (LFO1/2 AMS)," you can apply the tremolo effect by pressing the [SW1]or [SW2] key when desired.

Pan (PROG 5.1–1b)

The oscillator pan can be controlled by EG, LFO, keyboard tracking, controllers, or tempo etc.

- If you select **Note No.** as the "AMS (Pan AMS)" and set "Intensity" to **+50**, panning will be controlled by the keyboard position: center at the C4 note, far right at C6 or above, and far left at C2 or below.
- If EG is selected as the "AMS (Pan AMS)," the oscillator pan will be controlled in synchronization with the changes in **EG** level. If "Intensity" is set to a **positive (+)** value, the pan will move toward the right as the EG level increases, and toward the left as the EG level decreases. If "Intensity" is set to a **negative (–)** value, the opposite effect will occur.

EG Level – Pitch EG (PROG 3.1–5b) – Filter EG (PROG 4.1–5b) – Amp EG (PROG 5.1–3b)

EG levels can be controlled by keyboard tracking, controllers, or tempo etc.

Set the "I (AMS Intensity)" value, and select **+/–/0** for each EG segment ("S" start, "A" attack, "B" break) to specify the direction of the effect (if any) on that segment.
+: AMS will function according to the Intensity setting.
–: The sign of the Intensity setting will be inverted.
0: AMS will have no effect.
If "I (AMS Intensity)" is set to **+66**, the various EG levels can be controlled over a maximum range of ±99.

- Set "AMS" to **Velocity** for Amp EG Level Modulation, "I (AMS Intensity)" to **+66**, "S" to **0**, "A" to **+**, and "B" to **–**. Set all Amp EG levels to **+00**. As you play with increasing velocity, the EG levels will change more greatly. At the maximum velocity, the Start Level will stay at **+00**, but the Attack Level will change to **+99** and the Break Level will change to **–99**.

EG Time – Pitch EG (PROG 3.1–5c) – Filter EG (PROG 4.1–5c) – Amp EG (PROG 5.1–3c)

EG times can be controlled by keyboard tracking, controllers, or tempo etc. Set the "I (AMS Intensity)" value, and select **+/–/0** for each EG segment ("A" attack, D" decay, "S" slope, "R" release) to specify the direction of the effect (if any) on that segment.
+: AMS will function according to the Intensity setting.
–: The sign of the Intensity setting will be inverted.
0: AMS will have no effect.
Each EG time is determined by the Alternate Modulation value at the moment that the corresponding EG point is reached. For example, the Alternate Modulation value at the moment that the Attack Level is reached will determine the Decay Time.
If "I (AMS Intensity)" is set to a value of **8**, **17**, **25**, **33**, **41**, or **49**, the corresponding time can be multiplied by a maximum of 2, 4, 8, 16, 32, or 64 times (or divided by 1/2, 1/4, 1/8, 1/16, 1/32, 1/64).

- Select **JS+Y#01** for "AMS," and set "I (AMS Intensity)" to **+8**, "A" to **+**, "D" to **–**, and "S" and "R" to **0**. When you move the joystick in the +Y direction, the Attack Time will be lengthened by a maximum of 2 times. The Decay Time will be shortened by a maximum of 1/2. The Slope and Release times will not change.

LFO Frequency (PROG 5.3–1b)

The frequency of LFO 1 or 2 can be controlled by EG, keyboard tracking, controllers, or tempo etc., You can even use the LFO2 frequency to modulate the LFO1 frequency.
If "Int (AMS 1/2 Intensity)" is set to a value of 16, 33, 49, 66, 82, or 99, the corresponding frequency can be multiplied by a maximum of 2, 4, 8, 16, 32, or 64 times (or divided by 1/2, 1/4, 1/8, 1/16, 1/32, 1/64).

- Select **JS+Y#01** for "AMS1/2 (Freq. AMS1/2)," and set "Int (AMS1/2 Intensity)" to **+16**. When you move the joystick in the +Y direction, the LFO frequency will be increased by a maximum of 2 times. If you set "Int (AMS1/2 Intensity)" to **–16** and move the joystick in the +Y direction, the LFO frequency will be decreased by up to 1/2.

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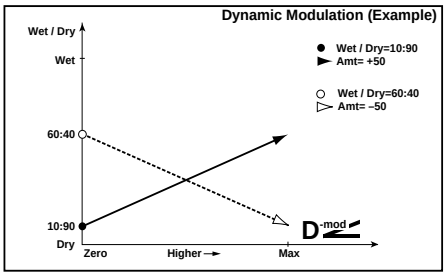
Dynamic Modulation Source (Dmod)

You can control certain effect parameters using the joystick, REALTIME CONTROLS knobs, etc. "on the fly." Controlling effects in this way is referred to as **Dynamic Modulation**. For example, you can use After Touch to speed up the LFO of the chorus and flanger, or you can use the joystick to activate the wah effect. In this way, you will be able to take full advantage of the effects as part of the expressive potential of your TRITON Le.
Most of the parameters for dynamic modulation consist of parameter values for "**(Source)**" and "**(Amount)**." The "(Source)" field selects the modulation source, and "(Amount)" sets the amount of dynamic modulation effect. When the modulation source is set to the maximum value, the actual degree of the effect will be the parameter value plus the "(Amount)" value.

Example: "W / D (Wet / Dry)" **10:90**, "(Source)" **AfterT**, "(Amount)" **+50**

In this case, the effect balance is 10:90. As you apply After Touch, the percentage of the effect sound will increase.

When After Touch is at its maximum, the effect balance will be 60:40.



The dynamic modulation effect will not be affected if you modify the "(Amount)" value while dynamic modulation is being applied. The change will become effective when you operate the dynamic modulation source again.

Refer to the corresponding effect section for an explanation of other dynamic modulation parameters.
In the table of parameters for each effect, dynamic modulation parameters are marked by a D-mod symbol at the right of the parameter.

Dynamic Modulation Source List

Source name	Explanation	
Off	dynamic modulation is not used	
Gate1	note on/off	(☞p.218)
G1+Dmp (Gate1+Damper)	note on + damper on/off	(☞p.218)
Gate2	note on/off (retrigger)	(☞p.218)
G2+Dmp (Gate2+Damper)	note on + damper on/off (retrigger)	(☞p.218)
Note No. (Note Number)	note number	
Vel (Velocity)	Velocity	
AfterT (After Touch)	after touch (Channel After Touch)	
JS X (Joy Stick X)	joystick X (horizontal) direction	
JS+Y#1 (Joy Stick +Y: CC#01)	joystick +Y (away) direction (CC#01)	
JS-Y#2 (Joy Stick -Y: CC#02)	joystick –Y (toward yourself) direction (CC#02)	
Pdl#4 (Foot Pedal: CC#04)	assignable foot pedal (CC#04)	(☞p.218)
FX1#12 (FX Control1: CC#12)	MIDI effect control 1(CC#12)	
FX2#13 (FX Control2: CC#13)	MIDI effect control 2(CC#13)	
Rbn#16 (Ribbon: CC#16)	MIDI CC#16: controller (ribbon controller*)	
Sld#18 (Value Slider: CC#18)	MIDI CC#18: Controller (Value Slider*)	
Kb1#17 (Knob Mod1: CC#17)	realtime control knob 1 in B-mode (knob modulation 1 CC#17)	(☞p.218)
Kb2#19 (Knob Mod2: CC#19)	realtime control knob 2 in B-mode (knob modulation 2 CC#19)	(☞p.218)
Kb3#20 (Knob Mod3: CC#20)	realtime control knob 3 in B-mode (knob modulation 3 CC#20)	(☞p.218)
Kb4#21 (Knob Mod4: CC#21)	realtime control knob 4 in B-mode (knob modulation 4 CC#21)	(☞p.218)
Kb1[+] (Knob Mod1: CC#17 [+])	realtime control knob 1 in B-mode [+]	(☞p.218)
Kb2[+] (Knob Mod2: CC#19 [+])	realtime control knob 2 in B-mode [+]	(☞p.218)
Kb3[+] (Knob Mod3: CC#20 [+])	realtime control knob 3 in B-mode [+]	(☞p.218)
Kb4[+] (Knob Mod4: CC#21 [+])	realtime control knob 4 in B-mode [+]	(☞p.218)
Dmp#64 (Damper: CC#64)	damper pedal (CC#64)	
Prt#65 (Portamento Switch: CC#65)	portamento switch (CC#65)	
Sos#66 (Sosutenuto: CC#66)	sostenuto pedal (CC#66)	
SW1#80 (SW1 Mod.: CC#80)	assignable panel switch 1 (SW1 modulation CC#80)	(☞p.218)
SW2#81 (SW2 Mod.: CC#81)	assignable panel switch 2 (SW2 modulation CC#81)	(☞p.218)
FSW#82 (Foot Switch: CC#82)	assignable foot switch (CC#82)	
CC#83	MIDI Control Change (CC#83)	
Tempo	tempo (internal clock or external MIDI clock tempo data)	(☞p.218)

CC#: This is the control change number.

*: This indicates a controller or a function assigned to a controller on the TRITON / TRITONpro / TRITONproX. The controller and the type of MIDI messages it transmits will depend on the type of connected MIDI instrument.

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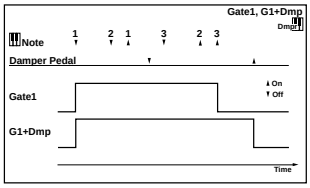
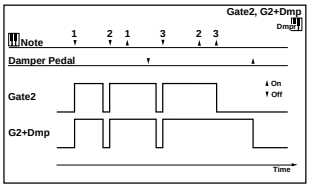
MIDI In Program mode and Sampling mode (if the EXB-SMPL option is installed), dynamic modulation of the insert effect and master effects is controlled on the global MIDI channel. (In Sampling mode, only the insert effect can be used.)
In Combination mode and Sequencer mode, dynamic modulation of the insert effect and master effects are controlled on the MIDI channel that has been specified as the "Control Channel" for IFX, MFX1, and MFX2 respectively.

Gate1, G1+Dmp (Gate1+Damper)
The effect is at maximum during note-on, and will stop when all keys are released. With **G1+Dmp**, the effect will remain at maximum even after the keys are released, as long as the damper (sustain) pedal is pressed.



Gate2, G2+Dmp (Gate2+Damper)
This is essentially the same as for Gate 1 or G1+Dmp. However when **Gate 2** or **G2+Dmp** are used as a dynamic modulation source for the EG of 22: St.Env.Flanger etc. or the AUTOFADE of 27: St.Vibrato, a trigger will occur at each note-on. (In the case of Gate 1 and G1+Dmp, the trigger occurs only for the first note-on.)



Pdl#4 (Foot Pedal: CC#04)
If you wish to use the assignable foot pedal as a dynamic modulation source, set "Foot Pedal Assign" (GLOBAL 1.1–3a) to **Foot Pedal (CC#04)**. (☞p.223 "Foot Pedal Assign")
A foot controller etc. connected to the ASSIGNABLE PEDAL jack can be used to control an effect.

Kb1#17 (Knob Mod1: CC#17)
Kb2#19 (Knob Mod2: CC#19)
Kb3#20 (Knob Mod3: CC#20)
Kb4#21 (Knob Mod4: CC#21)
If you want to use the REALTIME CONTROLS [1]–[4] knobs as dynamic modulation sources in Pattern, Combination, Song, or Sampling modes (when the EXB-SMPL option is installed), access the 2.2: Ed-Ctrl / Control page (or the 5.2: Controller / Controls page for Sampling mode), and in "Knob B Assign," set "Knob1-B" to **Knob Mod.1 (CC#17)**, "Knob2-B Assign" to **Knob Mod.2 (CC#19)**, "Knob3-B Assign" to **Knob Mod.3 (CC#20)**, and "Knob4-B Assign" to **Knob Mod.4 (CC#21)**. (☞p.221 "Knob 1...4 B Assign")
When you set REALTIME CONTROLS to B-mode and operate knobs [1]–[4], the effect will be controlled.
Moving the knob to the 12 o'clock position will produce a effect of **0** as the dynamic modulation source. If "(Amount)" is a **positive (+)** value, rotating the knob toward the right will produce a positive change in the effect, and rotating it toward the left will produce a negative change. (With **negative (–)** values, the opposite effect will result.)

Kb1[+] (Knob Mod1: CC#17 [+])
Kb2[+] (Knob Mod2: CC#19 [+])
Kb3[+] (Knob Mod3: CC#20 [+])
Kb4[+] (Knob Mod4: CC#21 [+])
These differ from Kb1#17 (Knob Mod1: CC#17)–Kb4#21 (Knob Mod4: CC#21) in the knob position and direction of the effect. If "(Amount)" is set to a **positive (+)** value, rotating the knob to the far right will produce an effect of **0** as the dynamic modulation source. Rotating the knob toward the right will apply an effect only in the positive direction. (With **negative (–)** settings, the opposite effect will result.)

SW1#80 (SW1 Mod.: CC#80)
SW2#81 (SW2 Mod.: CC#81)
If you want to use the [SW1] and [SW2] keys as dynamic modulation sources in Program, Combination, Song, or Sampling (when the EXB-SMPL option is installed) modes, access the 2.2: Ed-Ctrl / Controller page (or the 5.2: Controller / Controls page for Sampling mode), and in "SW1 / 2 Assign," set "SW1" to **SW1 Mod. (CC#80)** and "SW2" to **SW2 Mod. (CC#81)**. (☞p.220 "SW1 / 2 Assign")
The effect will be controlled when you operate the [SW1] or [SW2] key.

FSW#82 (Foot Switch: CC#82)
If you wish to use an assignable foot switch as a dynamic modulation source, set "Foot SW Assign" (GLOBAL 6.1–1a) to **Foot SW (CC#82)** (☞p.222 "Foot Switch Assign").
The effect will be controlled when you operate a foot switch etc. connected to the ASSIGNABLE SWITCH jack.

Tempo
Modulation sources other than **Tempo** are internally processed as a value of 0–127 (–128 – +127). In contrast, **Tempo** uses the tempo data (BPM value) of the internal clock or the external MIDI clock. This means that when "♩" is **127** (BPM), it will have the same result as the maximum value (+127) of other modulation sources.

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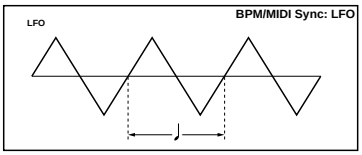
About the BPM / MIDI SYNC function

BPM / MIDI SYNC can be used for most effects that have an LFO, such as 09:St. Wah / Auto Wah, and for some delay-type effects such as 49:L / C / R BPM Delay. You can apply modulation that is synchronized to the tempo, or specify the delay time in terms of a note value so that the effect will synchronize to the tempo of the arpeggiator or sequencer during a live performance even if you change the tempo. Parameters that allow BPM / MIDI SYNC to be used are marked by a Sync symbol at their right in the list of parameters for each effect.

Example 1. LFO

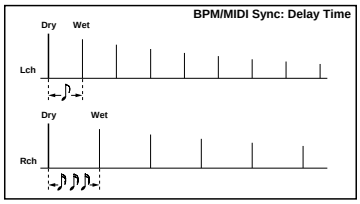
"BPM / MIDI Sync" **On**
"Base (Base Note)" ♩
"Times" **1**
In this case, each cycle of the LFO will be as long as one quarter note.



If "BPM" is set to **MIDI**, the effect will synchronize to the tempo of the arpeggiator or sequencer (or to an external MIDI clock). If "BPM" is in the range of **40–240**, the specified value will be used.

Example 2. Delay Time

"L Bs (Base Note)" ♪
"Times" **1**
"R Bs (Base Note)" ♪
"Times" **3**
In this case, the delay time of the left channel will be the duration of an eighth note, and the delay time of the right channel will be the duration of a sixteenth note triplet.



When "BPM" is set to **MIDI**, the effect will synchronize to the tempo of the arpeggiator or sequencer (or to an external MIDI clock). If "BPM" is in the range of **40–240**, the specified value will be used.
If the tempo, "Bs (Base Note)," and "Times" settings in conjunction would cause the maximum delay time to be exceeded, the warning "TimeOver? >OVER!" will appear in the display. Please modify your settings so that this setting does not appear. (The maximum delay time will depend on the effect type.)

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SW1/2 Assign

The following functions can be assigned to the [SW1] or [SW2] keys.

- For a program, combination, or song make the settings in 2.2: Ed-Ctrl/Controller page “SW1/2 Assign” (2.2–1b).
- In Sampling mode (when the EXB-SMPL option is installed), assign the functions in the 5.2: Controller/Controls page setting “SW1/2 Assign” (5.2–1b).

note This can be set for each program in Program mode, each combination in Combination mode, and each song in Sequencer mode. For Sampling mode, the settings apply to the entire mode.

SW1, SW2 Assign List

Off	no function
SW1 Mod.(CC#80) (SW1 Modulation:CC#80) SW2 Mod.(CC#81) (SW2 Modulation:CC#81)	Select this when using the switch as an Alternate Modulation or Effect Dynamic Modulation source. In this case, you must first specify the control destination. Each time the switch is turned On/Off, a CC#80 (or CC#81) message will be transmitted (Off: 0, On: 127). (☞p.220)
Porta.SW(CC#65) (Portamento Switch:CC#65)	When you press SW1 (or SW2) to turn it on (LED lit), portamento will be applied. Each time this is turned On/Off, CC#65 will be transmitted (Off: 0, On: 127). (☞p.220)
Octave Down	Each time you press SW1 (or SW2), the pitch will alternate between 1 octave lower and the original octave setting (1 octave down when the LED is lit).
Octave Up	Each time you press SW1 (or SW2), the pitch will alternate between 1 octave higher and the original octave setting (1 octave up when the LED is lit).
JS X Lock	Lock the effect of the joystick X direction. (☞p.220)
JS+Y Lock	Lock the effect of the joystick +Y direction. (☞p.220)
JS-Y Lock	Lock the effect of the joystick -Y direction. (☞p.220)
Ribbon Lock :N/A	— (☞p.220)
JS X&Rbn Lock :N/A	— (☞p.220)
JS+Y&Rbn Lock :N/A	— (☞p.220)
JS-Y&Rbn Lock :N/A	— (☞p.220)
AfterT Lock	Lock the effect of after touch. (☞p.220)

SW1 Mod.(CC#80) (SW1 Modulation:CC#80)
SW2 Mod.(CC#81) (SW2 Modulation:CC#81)
This effect differs between SW1 and SW2. SW1 is handled as CC#80, and SW2 is handled as CC#81.

Porta.SW(CC#65) (Portamento Switch:CC#65)
When “Mode (Oscillator Mode)” (PROG 2.1–1a) is **Single**, turning the switch on (LED lit) will apply portamento regardless of the “Enable (Porta. Enable)” (PROG 3.1–1c) setting, and turning the switch off (LED off) will not apply portamento.
If “Mode (Oscillator Mode)” is **Double**, and if the “Enable (Porta. Enable)” setting is the same for OSC1 and 2 (i.e., **Enable** or **Disable** for both OSC1 and 2), then portamento will be applied to OSC1 and 2 when the switch is turned on (LED lit), and portamento will not be applied to OSC1 and 2 when the switch is turned off (LED off).
If the “Enable (Porta. Enable)” setting is different for OSC1 and 2 (i.e., OSC1 is **Enable** and OSC2 is **Disable**, or OSC1 is **Disable** and OSC2 is **Enable**), then portamento will be applied to the OSC whose setting is **Enable** when the switch is turned on (LED lit), and portamento will be applied to neither OSC when the switch is turned off (LED off).

JS X Lock, JS+Y Lock, JS-Y Lock, AfterT Lock
The state of the selected controller (joystick, after touch) will alternate between Lock and Unlock (Lock when the LED is lit).
While the joystick or after touch is being operated, turning Lock on will lock (fix) the effect at the current position of that controller.

For example if you select **JS+Y Lock**, move the joystick away from yourself, and then turn Lock on, the operation produced by the joystick (+Y) will be locked (held) at that position. Even if you return the joystick to its original position, the modulation will continue to apply. At this time you can even move the joystick in the –Y direction to apply both types of modulation (joystick +Y and –Y) simultaneously.

MIDI When you Lock the joystick or after touch, MIDI transmission of the corresponding controller will be halted, but reception will still occur.

Ribbon Lock: N/A, JS X&Rbn Lock : N/A, JS+Y&Rbn Lock: N/A, JS-Y&Rbn Lock: N/A
These values can be specified, but will have no actual effect. N/A indicates Not Available (i.e., invalid).
Data compatibility is maintained between this instrument and the TRITON/TRITONpro/TRITONproX (TRITON keyboard models). Programs created on this instrument can be used on TRITON keyboard models, and the opposite is also true.
In order to maintain compatibility, it is necessary to specify these “invalid” parameters on this instrument.

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Knob 1...4 B Assign

The following functions can be assigned to the REALTIME CONTROLS [1]–[4] knobs in B-mode.

- For program, combination, or song, make these settings in 2.2: Ed-Ctrl / Controller page “Knob B Assign” (2.2–1a).
- In Sampling mode (when the EXB-SMPL option is installed), assign the functions in the 5.2: Controller / Controls page setting “Knob B Assign” (5.2–1a).

note This can be set for each program in Program mode, each combination in Combination mode, and each song in Sequencer mode. For Sampling mode, the settings apply to the entire mode.

Realtime Control Knobs B Assign List

Off	No function
Knob Mod. 1 (CC#17)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select **KnobM1#17** for “AMS,” or **Kb1#17** for “Dmod Src.” Simultaneously, CC#17 will be transmitted.
Knob Mod. 2 (CC#19)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select **KnobM2#19** for “AMS,” or **Kb2#19** for “Dmod Src.” Simultaneously, CC#19 will be transmitted.
Knob Mod. 3 (CC#20)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select **KnobM3#20** for “AMS,” or **Kb3#20** for “Dmod Src.” Simultaneously, CC#20 will be transmitted.
Knob Mod. 4 (CC#21)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select **KnobM4#21** for “AMS,” or **Kb4#21** for “Dmod Src.” Simultaneously, CC#21 will be transmitted.
Master Volume	Control the volume. Simultaneously, the universal system exclusive message Master Volume [F0H, 7FH, nn, 04, 01, vv, mm, F7H] will be transmitted to adjust the volume of all tracks or timbres (while preserving the volume balance between tracks or timbres).
Porta. Time (CC#05)	Control the portamento time. Simultaneously, CC#5 will be transmitted.
Volume (CC#07)	Control the volume. Simultaneously, CC#7 will be transmitted.
IFX Pan (CC#08)	Control the panning after the insertion effect. Simultaneously, CC#8 will be transmitted.
Pan (CC#10)	Control the oscillator panning. Simultaneously, CC#10 will be transmitted.
Expression (CC#11)	Control the expression. Simultaneously, CC#11 will be transmitted.
FX Ctrl 1 (CC#12)	Control Effect Dynamic Modulation. When controlling this, set “Dmod Src” to **FX1#12**. Simultaneously, CC#12 will be transmitted.
FX Ctrl 2 (CC#13)	Control Effect Dynamic Modulation. When controlling this, set “Dmod Src” to **FX2#13**. Simultaneously, CC#13 will be transmitted.
Flt Cutoff (CC#74)	Control the cutoff frequency of the Filter (low pass filter). Simultaneously, CC#74 will be transmitted.
Flt Reso. (CC#71)	Control the resonance of the Filter, or the cutoff frequency of the high pass filter. If the program’s “Type (Filter1/2 Type)” is **Low Pass Resonance**, the resonance level will be controlled. If it is **Low Pass & High Pass**, the cutoff frequency of the high pass filter will be controlled. Simultaneously, CC#71 will be transmitted.
Flt EG Int. (CC#79)	Control the EG intensity of the Filter. Simultaneously, CC#79 will be transmitted.
F/A Attack (CC#73)	Control the EG attack of the Filter and Amplifier. Simultaneously, CC#73 will be transmitted.
F/A Decay (CC#75)	Control the EG decay time and slope time of the Filter and Amplifier. Simultaneously, CC#75 will be transmitted.
F/A Sus. (CC#70)	Control the EG sustain level of the Filter and Amplifier. Simultaneously, CC#70 will be transmitted.
F/A Rel. (CC#72)	Control the EG release time of the Filter and Amplifier. Simultaneously, CC#72 will be transmitted.
P LFO1 Spd (CC#76)	Control the frequency of LFO1. Simultaneously, CC#76 will be transmitted.
P LFO1 Dep (CC#77)	Control the LFO1 intensity of the pitch. Simultaneously, CC#77 will be transmitted.
P LFO1 Dly (CC#78)	Control the delay of LFO1. Simultaneously, CC#78 will be transmitted.
SW 1 Mod. (CC#80)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to **SW 1 #80**. Simultaneously, CC#80 will be transmitted.
SW 2 Mod. (CC#81)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to **SW 2 #81**. Simultaneously, CC#81 will be transmitted.
Foot SW (CC#82)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select **FootSW#82** for “AMS,” or **FSW#82** for “Dmod Src.” Simultaneously, CC#82 will be transmitted.
MIDI CC#83 (CC#83)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select **MIDI CC#83** for “AMS,” or **CC#83** for “Dmod Src.” Simultaneously, CC#83 will be transmitted.
MFX Send 1 (CC#93)	Control the send level to Master Effect1. Simultaneously, CC#93 will be transmitted.
MFX Send 2 (CC#91)	Control the send level to Master Effect2. Simultaneously, CC#91 will be transmitted.
MIDI CC#00...CC#95	The specified MIDI control change (CC#) will be transmitted. If this instrument is set so as to be controlled by the control change message, the corresponding control will occur.

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The A-mode functions of the REALTIME CONTROLS are fixed.

Knob1-A: LPF Cutoff (Filter LPF Cutoff: CC#74)
Control the low pass filter cutoff frequency of the filter. Simultaneously, CC#74 will be transmitted.

Knob2-A: Resonance / HPF (Filter Resonance / HPF Cutoff: CC#71)
Control the resonance level or the cutoff frequency of the high pass filter. If the program "Filter Type" is **Low Pass Resonance**, the resonance level will be controlled. If "Filter Type" is **Low Pass & High Pass**, the cutoff frequency of the high pass filter will be controlled. Simultaneously, CC#71 will be transmitted.

Knob3-A: EG-Intensity (Filter EG Intensity: CC#79)
Control the filter EG intensity. Simultaneously, CC#79 will be transmitted.

Knob4-A: EG-Release (Filter, Amplifier EG Release: CC#72)
Control the release time of the filter and amplifier EG. Simultaneously, CC#72 will be transmitted.

Foot Switch Assign

You can assign the function of an assignable switch (separately sold Korg PS-1 option) connected to the ASSIGNABLE SWITCH jack.

- This setting is made in GLOBAL 1.1: System Foot page "Foot SW Assign" (1.1–3a).

MIDI If you select a function that includes a CC#, that MIDI control change message will be transmitted each time the switch is turned on / off. (Off: 0, On: 127)

Foot Switch Assign List

Off	The connected foot switch will not function.
Foot SW (CC#82)	Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, select **Foot SW:#82** for "AMS" or **FSW#82** for "Dmod Src."
Portamento SW (CC#65)	Control portamento on/off.
Sostenuto (CC#66)	Control the sostenuto effect (which holds only the keys (Note No.) that were being held at the moment that the pedal switch was turned on).
Soft (CC#67)	Turn the soft pedal effect on/off.
Arpeggio SW	Turn the arpeggiator on/off. The NRPN message [Bn 63 00 Bn 62 02 Bn 06 00 (off) or 7F (on)] will be transmitted each time this is turned on/off.
Program Up	The switch can be used to select programs or combinations. When in PROG 1.1: Play, the program that follows the currently selected program will be selected. When in COMBI 1.1: Play, the combination that follows the currently selected combination will be selected. Simultaneously, a Bank Select message and Program Change message will be transmitted.
Program Down	The switch can be used to select programs or combinations. When in PROG 1.1: Play, the program that precedes the currently selected program will be selected. When in COMBI 1.1: Play, the combination that precedes the currently selected combination will be selected. Simultaneously, a Bank Select message and Program Change message will be transmitted.
Song Start/Stop	The switch can be used to start/stop the sequencer. Simultaneously, a MIDI Start or Stop message will be transmitted.
Song Punch In/Out	If "REC Setup"(SEQ 1.1–6a) is set to **Manual Punch In**, the switch can be used to punch-in and punch-out when recording on the sequencer.
Cue Repeat Control	This can be used if in Cue List, the "Rep (Cue Edit-Repeat)" (SEQ 2.1–1b) setting of each step has been set to **FS**. Turning the pedal switch on while that step is repeating will be the trigger for advancing to the next step. When the end of the song is reached, this will advance to the next step (song).

Portamento SW (CC#65)
When the "Mode (Oscillator Mode)" (PROG 2.1–1a) is **Single**, turning the switch on will apply portamento regardless of the "Enable (Porta. Enable)" (PROG 3.1–1c) setting, and turning the switch off will not apply portamento.
If "Mode (Oscillator Mode)" is **Double**, and if the "Enable (Porta. Enable)" setting is the same for OSC1 and 2 (i.e., **Enable** or **Disable** for both OSC1 and 2), then portamento will be applied to OSC1 and 2 when the switch is turned on, and portamento will not be applied to OSC1 and 2 when the switch is turned off.
If the "Enable (Porta. Enable)" setting is different for OSC1 and 2 (i.e., OSC1 is **Enable** and OSC2 is **Disable**, or OSC1 is **Disable** and OSC2 is **Enable**), then portamento will be applied to the OSC whose setting is **Enable** when the switch is turned on, and portamento will be applied to neither OSC when the switch is turned off.

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Foot Pedal Assign

You can assign the function that will be controlled by an assignable pedal (separately sold Korg XVP-10 or EXP-2 option) connected to the ASSIGNABLE PEDAL jack.

- This setting is made in GLOBAL 1.1: System Foot page "Foot Pedal Assign" (1.1–3a).

MIDI If you select a function that includes a CC#, that MIDI control change message will be transmitted each time the pedal is operated. (min: 0, max: 127)

Foot Pedal Assign List

Off	The connected pedal will not function.
Master Volume	Control the volume. Simultaneously, the universal exclusive message Master Volume [F0H, 7FH, nn, 04, 01, vv, mm, F7H] will be transmitted to control the volume of all timbres or tracks (while preserving the volume balance between timbres or tracks).
Foot Pedal (CC#04)	Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set "AMS" to **Pedal #04** or "Dmod Src" to **pdl#04**.
Portamento Time (CC#05)	Control the speed at which portamento will change the pitch.
Volume (CC#07)	Control the volume of a Program, of a timbre in a Combination, or of a track in Sequencer mode.
Post IFX Pan (CC#08)	Control the pan after passing through the insertion effect.
Pan (CC#10)	Control the pan of a Program, of a timbre in a Combination, or of a track in Sequencer mode.
Expression (CC#11)	Control the volume of a Program, of a timbre in a Combination, or of a track in Sequencer mode. Expression is multiplied with the Volume value to determine the actual volume level.
FX Control 1 (CC#12)	Control Effect Dynamic Modulation. To control this, set Dmod Src to **FX1#12**.
FX Control 2 (CC#13)	Control Effect Dynamic Modulation. To control this, set Dmod Src to **FX2#13**.
MFX Send 1 (CC#93)	Control the send level to master effect 1 (MFX1) from a Program, a timbre in a Combination, or a track in Sequencer mode. Simultaneously, this will also control the send level to master effect 1 (MFX1) from after the insertion effect of the matching MIDI channel.
MFX Send 2 (CC#91)	Control the send level to master effect 2 (MFX2) from a Program, a timbre in a Combination, or a track in Sequencer mode. Simultaneously, this will also control the send level to master effect 2 (MFX2) from after the insertion effect of the matching MIDI channel.

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MIDI transmission when the TRITON Le's controllers are operated

The following table shows the relation between the MIDI messages that are transmitted when the TRITON Le's controllers are operated, and the AMS (alternate modulation source) or DMS (dynamic modulation source) that correspond to each MIDI message. # indicates a fixed function, and * indicates an assignable function.
When one of the TRITON Le's controllers is operated, the corresponding or the assigned control change will be transmitted. Pitch Bend messages will be transmitted only when the joystick is moved in the X (horizontal) direction. The operation in each mode is described below. (Explanations are given only for control changes, but the same applies to pitch bend as well.)

Program mode

When one of the TRITON Le's controllers is operated, a control change message will be transmitted on the global MIDI channel.

If a REALTIME CONTROLS B-mode knob [1]–[4] is set to **Master Volume**, the universal exclusive message Master Volume will be transmitted.

Combination mode

When one of the TRITON Le's controllers is operated, a control change message will be transmitted on the global MIDI channel.
Simultaneously, the message will also be transmitted on the MIDI channel ("MIDI Channel" COMBI 3.1–1a) of any timbre whose "Status"(COMBI 3.1–1a) is **EXT** or **EX2**.
When one of the TRITON Le's controllers is operated, its effect will apply to any timbre whose "Status" is **INT** and whose "MIDI Channel" setting is either **Gch** or the same as the global MIDI channel.

In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted only on the global MIDI channel.

You can make settings for MIDI Filter (COMBI 4.1–4.4) to **enable** or **disable** control changes and controllers for each timbre. When **checked**, the above operations will be enabled.

Effect dynamic modulation can be controlled when the "Control Ch (Control Channel)" (COMBI 7.1–1b, 7.2–1a, 7.2–1c) setting for IFX, MFX1, 2, or MEQ is either set to **Gch** or to the same channel as the global MIDI channel. (In the case of **All Rt.**, control is possible on the MIDI channel of any routed timbre.)

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Sequencer mode
When one of the TRITON Le's controllers is operated, its effect will apply to the track 1–16 that is selected by "Track Select" (SEQ 1.1–1c).

If the "Status" (SEQ 3.1–1a / 2a) of the track selected by "Track Select" is **EXT**, **EX2**, or **BTH**, a control change message will be transmitted on the MIDI channel specified by "MIDI Channel" (SEQ 3.1–1a / 2a).
If the "Status" is **INT** or **BTH**, operating one of the TRITON Le's controllers will affect only that track. Simultaneously, the same effect will also apply to any track with the same "MIDI Channel" setting.

In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted.

You can make settings for MIDI Filter (SEQ 4.1–4.4) to **enable** or **disable** control changes and controllers for each track. When checked, the operations effective for a "Status" of **INT** or **BTH** will be enabled. Tracks whose "Status" is **EXT**, **EX2**, or **BTH** will transmit control changes regardless of this setting.

Effect dynamic modulation can be controlled when the "Control Ch (Control Channel)" (SEQ 7.1–1b, 7.2–1a, 7.2–1c) setting for IFX, MFX1, 2, or MEQ matches the MIDI channel of the track selected by "Track Select." (In the case of **All Rt.**, control is possible on the MIDI channel of all routed tracks.) If one of the TRITON Le's controllers is operated during realtime recording, the corresponding or assigned control change will be recorded.

Sampling mode
When one of the TRITON Le's controllers is operated, a control change message will be transmitted on the global MIDI channel ("MIDI Channel" GLOBAL 2.1–1a).

In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted.

It is not possible to make AMS settings in Sampling mode.

* **Global MIDI channel:**
GLOBAL 2.1: MIDI "MIDI Channel" (2.1–1a)

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			TRITON Le controller										Available for AMS	Available for DMOD
			Joy Stick	Realtime Controls A	Realtime Controls B	Arp-Gate (Realtime Controls C)	Arp-Velocity (Realtime Controls C)	SW1,2	ARP On/Off	Damper	Assign-able Switch	Assign-able Pedal		
MIDI channel messages														
		Note-off												
		Note-on (note number)											*	*
		Note-on (velocity)											*	*
		Poly after touch											*	
CC#	0	Bank select (MSB)			*									
	1	Modulation 1	# (+Y)		*								*	*
	2	Modulation 2	# (–Y)		*								*	*
	3	–			*									
	4	Foot controller			*							*	*	*
	5	Portamento time			*									
	6	Data entry (MSB)			*									
	7	Volume			*							*		
	8	Post insertion effect panpot			*							*		
	9	–			*									
	10	Panpot			*							*		
	11	Expression			*							*		
	12	Effect control 1			*							*		*
	13	Effect control 2			*							*		*
	14...15				*									
	16	Ribbon controller			*								*	*
	17	Knob modulation 1			*								*	*
	18	Controller (CC#18)			*								*	*
	19	Knob modulation 2			*								*	*
	20	Knob modulation 3			*								*	*
	21	Knob modulation 4			*								*	*
	22...31	–			*									
	32	Bank select (LSB)			*									
	33...37	–			*									
	38	Data entry (LSB)			*									
	39...63	–			*									
	64	Damper			*					#			*	*
	65	Portamento On/Off			*			*			*		*	*
	66	Sostenuto On/Off			*						*		*	*
	67	Soft			*						*		*	
	68...69	–			*									
	70	Sustain level			*									
	71	Filter resonance level/High pass filter cutoff frequency		* (Knob2)	*									
	72	Release time		* (Knob4)	*									
	73	Attack time			*									
	74	Low pass filter cutoff frequency		* (Knob1)	*									
	75	Decay time			*									
	76	LFO1 speed			*									
	77	LFO1 depth (pitch)			*									
	78	LFO1 delay			*									
	79	Filter EG intensity		* (Knob3)	*									
	80	SW1 modulation On/Off			*			* (SW1)					*	*
	81	SW2 modulation On/Off			*			* (SW2)					*	*
	82	Foot switch On/Off			*						*		*	*
	83	Controller (CC#83)			*								*	*
	84...90	-			*									
	91	Effect depth 1 (send 2 level)			*							*		
	92	Effect depth 2 (insertion effect On/Off)			*									
	93	Effect depth 3 (send 1 level)			*							*		
	94	Effect depth 4 (master effect 1 On/Off)			*									
	95	Effect depth 5 (master effect 2 On/Off)			*									
	96	Data increment												
	97	Data decrement												
	98	NRPN(LSB)												
		2: Arpeggiator on/off switch							#		*			
		10: Arpeggiator gate control				#								
		11: Arpeggiator velocity control					#							
	99	NRPN(MSB) 0				#	#		#		*			
	100	RPN(LSB)												
		0: Bend range												
		1: Fine tune												
		2: Coarse tune												
	101	RPN(MSB) 0												
	102...127	-												
		Program change												
		Channel after touch											*	*
		Bender change	# (X)										*	*
Universal exclusive														
		Master volume			*							*		
		Master balance												
		Master fine tune												
		Master coarse tune												

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TRITON Le operations when control changes are transmitted / received

The following table shows the operations that the TRITON Le will perform when control change messages are received, and the relation between settings and controller movements on this instrument

CC #	Control	Value	Function
0	Bank select (MSB)	0...127	bank select message MSB *1
1	Modulation 1	0...127	corresponds to joystick movement in the +Y direction (away from yourself)
2	Modulation 2	0...127	corresponds to joystick movement in the -Y direction (toward yourself)
4	Foot controller	0...127	corresponds to when the assignable pedal function is set to **Foot Pedal**
5	Portamento time	0...127	portamento time
6	Data entry (MSB)	0...127	MSB of RPN and NRPN data *2
7	Volume	0...127	volume *3
8	Post insertion effect panpot	0...127	pan after the insertion effect
10	Panpot	0...127	pan
11	Expression	0...127	volume *3
12	Effect control 1	0...127	for controlling Effect Dynamic Modulation (same as Dmod Src: FX1 #12)
13	Effect control 2	0...127	for controlling Effect Dynamic Modulation (same as Dmod Src: EX2 #13)
16	Controller (CC#16)	0...127	for controlling Modulation, Alternate Modulation (same as AMS: Ribbon #16), Effect Dynamic Modulation (same as Dmod Src Rbn#16)
17	Knob modulation 1	0...127	corresponds to when Knob Mod.1 is assigned as the B-mode function of a REALTIME CONTROLS knob
18	Controller (CC#18)	0...127	for controlling Alternate Modulation (same as AMS: Slider #18), Effect Dynamic Modulation (same as Dmod Src: Sld #18)
19	Knob modulation 2	0...127	corresponds to when Knob Mod.2 is assigned as the B-mode function of a REALTIME CONTROLS knob
20	Knob modulation 3	0...127	corresponds to when Knob Mod.3 is assigned as the B-mode function of a REALTIME CONTROLS knob
21	Knob modulation 4	0...127	corresponds to when Knob Mod.4 is assigned as the B-mode function of a REALTIME CONTROLS knob
32	Bank select (LSB)	0...127	LSB of bank select message *1
38	Data entry (LSB)	0...127	LSB of RPN or NRPN data *2
64	Damper	0...127	damper effect
65	Portamento On/Off	0...63(Off), 64...127(On)	turn the portamento effect on/off
66	Sostenuto On/Off	0...63(Off), 64...127(On)	turn the sostenuto effect on/off
67	Soft	0...127	soft pedal effect
70	Sustain level	0...127	sustain levels of the filter EG and amp EG *4
71	Filter resonance level High pass filter cutoff frequency	0...127	resonance level of the filter *5 cutoff frequency of the high pass filter *4
72	Release time	0...127	release times of the filter EG and amp EG *4
73	Attack time	0...127	attack times of the filter EG and amp EG *4
74	Low pass filter cutoff frequency	0...127	cutoff frequency of the low pass filter *4
75	Decay time	0...127	decay times/slope times of the filter EG and amp EG *4
76	LFO1 speed	0...127	LFO1 speed *4
77	LFO1 depth	0...127	pitch LFO1 intensity *4
78	LFO1 delay	0...127	LFO1 delay *4
79	Filter EG intensity	0...127	filter EG intensity *4
80	SW1 modulation On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the SW1 function is set to SW1 Mod.
81	SW2 modulation On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the SW2 function is set to SW2 Mod.
82	Foot switch On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the function of the assignable foot switch is set to Foot SW
83	Controller (CC#83)	0...127	for controlling Alternate Modulation (same as AMS: MIDI CC#8), Effect Dynamic Modulation (same as Dmod Src: CC#83)
91	Effect depth 1 (send 2 level)	0...127	send 2 level
92	Effect depth 2 (insertion effect On/Off)	0(Off), 1...127(On)	turn insertion effect on/off *6
93	Effect depth 3 (send 1 level)	0...127	send 1 level
94	Effect depth 4 (master effect 1 On/Off)	0(Off), 1...127(On)	master effect 1 on/off *6
95	Effect depth 5 (master effect 2 On/Off)	0(Off), 1...127(On)	master effect 2 on/off *6
96	Data increment	0	
97	Data decrement	0	
98	NRPN(LSB)	2 10 11	corresponds to the arpeggiator on/off switch *7 corresponds to the arpeggiator Gate control knob *7 corresponds to the arpeggiator Velocity control knob *7
99	NRPN (MSB)	0	MSB of NRPN
100	RPN(LSB)	0 1 2	select the pitch bend range *2 select Fine Tune *2 select Coarse Tune *2
101	RPN(MSB)	0	MSB of RPN

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Any control change number (CC#00–95) can be assigned as the B-mode function of a REALTIME CONTROLS knob. In this case, the transmitted values will all be 0–127.

***1** On the TRITON Le's sequencer, bank select messages are normally specified as a program change event ("Event Edit" SEQ 5.2–1b). However in some cases this will be insufficient when you wish to change banks on an external device. In such cases, you can use CC#00 and CC#32 to specify the banks.

For information on the relation between bank select numbers and the banks of your external device, refer to the owner's manual for your external device.

***2** Unlike conventional control changes, pitch bend range, fine tune, and coarse tune settings are made using RPC (Registered Parameter Control) messages. In Program, Combination, and Sequencer modes, you can use RPC messages to control the bend range and tuning for each program, combination (Combination), or track (Sequencer). The procedure is to use an RPN (Registered Parameter Number) message to select the parameter that you wish to edit, and then use Data Entry to input a value for that parameter. To select the parameter, use CC#100 (with a value of 00–02) and CC#101 (with a value of 00). use CC#06 and CC#38 to enter the data.

The data entry values for each parameter and the corresponding settings are as follows.

RPN=0 (Pitch bend range)

CC#06	CC#38	Parameter value (Semitone steps)
00	00	0
01	00	+ 1
⋮	⋮	⋮
12	0	+12

RPN=1 (Fine tune)

CC#06	CC#38	Parameter value (1 cent steps)
32	00	–50
⋮	⋮	⋮
48	00	–25
⋮	⋮	⋮
64	00	0
⋮	⋮	⋮
96	00	+50

RPN=2 (Coarse tune)

CC#06	CC#38	Parameter value (Semitone steps)
40	00	–24
⋮	⋮	⋮
52	00	–12
⋮	⋮	⋮
64	00	0
⋮	⋮	⋮
88	00	+24

For example, if in Sequencer mode you wish to set a track that is receiving channel 1 to a transpose (coarse tuning) value of -12, you would first transmit [B0, 64, 02] (64H=CC#100) and [B0, 65, 00] (65H=CC#101) to this instrument to select the RPN coarse tune. Then you would set this to –12 by transmitting [B0, 06, 34] (06H=CC#6), 34H=52 (corresponds to –12), and [B0, 26, 00] (26H=CC#38, 00H=0).

***3** The volume of the TRITON Le is determined by summing the Volume (CC#07) with the Expression (CC#11). When you select a song in Sequencer mode, the volume will be set to the values specified for each track, and the expression will be set to the maximum value (127).

***4** A value of 64 will correspond to the value specified by the program parameter. 0 will be the minimum, and 127 will be the maximum. Changing from 63–1 or from 65–126 will adjust the effect from the program parameter setting toward the minimum value or maximum value. The internal program parameters listed in (*4, *5) will be controlled.

***5** If the filter type of the corresponding program is **Low Pass Resonance**, the filter resonance level will be controlled. If the filter type is **Low Pass & High Pass**, the cutoff frequency of the high pass filter will be controlled.

***4, *5**

CC#70–79 correspond to the following program parameters of the TRITON Le.

In Program mode, when CC#70–79 is received on the global MIDI channel ("MIDI Channel" GLOBAL 2.1–1a), or when a REALTIME CONTROLS [1]–[4] knob is operated in A-mode or in B-mode when the function is assigned to CC#70–79, the corresponding program parameter will be edited temporarily. You can execute "Write Program" (PROG 1.1–1c)) to save that state (except for some parameters). When you execute "Write Program," the values of the corresponding program parameters will be rewritten.

In Sampling mode (if the EXB-SMPL option is installed) when playing the currently selected multisample on the keyboard, the same control changes or knob operations as in Program mode will temporarily edit the corresponding program parameters. You can use "Convert MS to Program" (SMPL 1.1–3f) to save that state as a program (except for some parameters).

In Combination, Sequencer modes, the program parameters of the program for the timbre / track of the corresponding MIDI channel will change, but this state can not be saved directly in the program.

CC#70: Sustain level
Corresponds to "Filter / Amp EG Sustain Level" (PROG 4.1 / 2: Ed–Filter1 / 2, EG page, 5.1 / 2: Ed–Amp1 / 2, EG page).

CC#71: Filter resonance level / High pass filter cutoff frequency
Corresponds to "Filter A Resonance" (PROG 4.1 / 2: Ed–Filter1 / 2, Basic page).
Corresponds to "Filter B Frequency" (PROG 4.1 / 2: Ed–Filter1 / 2, Basic page).

CC#72: Release time
Corresponds to "Filter / Amp EG Release Time" (PROG 4.1 / 2: Ed–Filter1 / 2, EG page, 5.1 / 2: Ed–Amp1 / 2, EG page).

CC#73: Attack time
Corresponds to Filter / Amp EG Attack Time" (PROG 4.1 / 2: Ed–Filter1 / 2, EG page, 5.1 / 2: Ed–Amp1 / 2, EG page)
Corresponds to "Amp EG Start Level" (PROG 5.1 / 2: Ed–Amp1 / 2, EG page).
Corresponds to "Amp EG Attack Level" (PROG 5.1 / 2: Ed–Amp1 / 2, EG page).
Corresponds to "Amp EG Level Modulation Start" (PROG 5.1 / 2: Ed–Amp1 / 2, EG page).
Corresponds to "Amp EG Time Modulation Attack" (PROG 5.1 / 2: Ed–Amp1 / 2, EG page).

CC#74: Low pass filter cutoff frequency
Corresponds to "Filter A Frequency" (PROG 4.1 / 2: Ed–Filter1 / 2, EG page).
Corresponds to "Filter B Frequency" (PROG 4.1 / 2: Ed–Filter1 / 2, EG page).

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CC#75: Decay time
Corresponds to “Filter / Amp EG Decay Time” (PROG 4.1 / 2: Ed–Filter1 / 2, EG page, 5.1 / 2: Ed–Amp1 / 2, EG page)
Corresponds to “Filter / Amp EG Slope Time” (PROG 4.1 / 2: Ed–Filter1 / 2, EG page, 5.1 / 2: Ed–Amp1 / 2, EG page)

CC#76: LFO1 speed
Corresponds to “LFO 1 Frequency” (PROG 5.3: Ed–LFOs, OSC1 / 2, LFO1 page).

CC#77: LFO1 depth (pitch LFO1 intensity)
Corresponds to “Pitch LFO1 Intensity” (PROG 3.1: Ed–Pitch, OSC1LFO page).

CC#78: LFO1 delay
Corresponds to “LFO1 Delay” (PROG 5.3: Ed–LFOs, OSC1 / 2, LFO1 page).

CC#79: Filter EG intensity
Corresponds to “Filter EG Intensity to A, B” (PROG 4.1 / 2: Ed–Filter1 / 2, Mod.1 page).

***6** Controlled on the global MIDI channel.

***7** NRPN (Non Registered Parameter Number) and Data Entry can be used to control the following parameters.

Arpeggiator on / off

[Bn 63 00 Bn 62 02 Bn 06 nn] (nn:00–3F off, 40–7F on)

Arpeggiator gate control

[Bn 63 00 Bn 62 0A Bn 06 nn] (nn:00–7F)

Arpeggiator velocity control

[Bn 63 00 Bn 62 0B Bn 06 nn] (nn:00–7F)

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MIDI applications

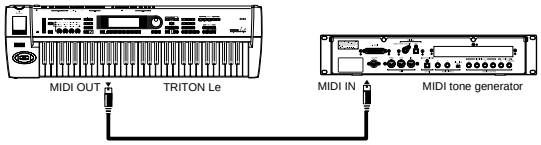
■ About MIDI

MIDI stands for Musical Instrument Digital Interface, and is a world-wide standard for exchanging various types of musical data between electronic musical instruments and computers. When MIDI cables are used to connect two or more MIDI devices, performance data can be exchanged between the devices, even if they were made by different manufacturers.

■ Connecting MIDI devices / computers (MIDI connectors)

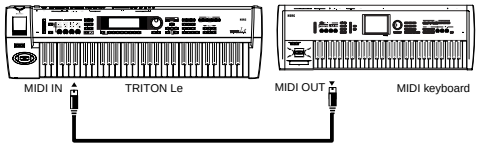
☐ *Controlling an external MIDI tone generator from this instrument*

When you wish to use the TRITON Le's keyboard, controllers, and sequencer etc. to play an external MIDI tone generator, use a MIDI cable to connect this instrument's MIDI OUT connector to the MIDI IN connector of the external MIDI tone generator.



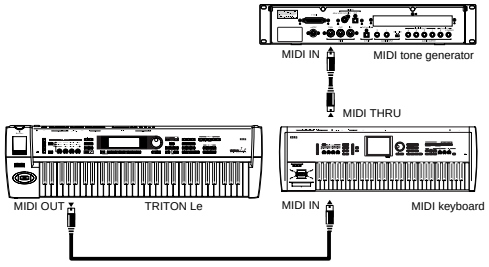
☐ *Controlling this instrument's tone generator from an external MIDI device*

When you wish to play or control the TRITON Le's tone generator from an external MIDI keyboard or sequencer etc., use a MIDI cable to connect the MIDI OUT connector of the external MIDI device to the MIDI IN connector of this instrument.

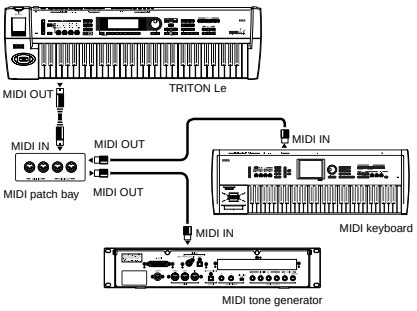


☐ *Controlling two or more external MIDI tone generators from this instrument*

You can use the MIDI THRU jack to simultaneously control multiple MIDI devices. (This type of connection should be used to connect no more than three devices. If you wish to connect a larger number of MIDI devices, we recommend that you use a MIDI patch bay as shown in the second diagram below.)



You can also use a MIDI patch bay to control multiple MIDI devices.



The "Convert Position" setting

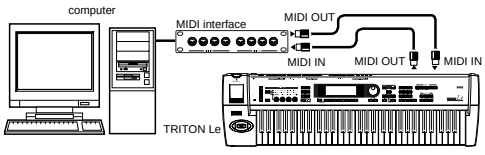
On the TRITON Le, the parameters "Key Transpose," "Velocity Curve" and "AfterT Curve" (GLOBAL 1.1–1a) allow you to transpose the pitch, adjust the velocity sensitivity, and adjust the after touch sensitivity (☞p.122).

The effect that these settings will have on the internal sequencer and on the MIDI data that is transmitted and received will depend on "Convert Position" (GLOBAL 2.1–1a) setting (☞p.127).

- When controlling an external MIDI tone generator from the TRITON Le, select **Pre MIDI**. The above-listed settings will affect the MIDI data that is transmitted. These settings will also affect the data that is recorded on the internal sequencer.
  Incoming MIDI data will be handled with settings equivalent to "Key Transpose" **0**, "Velocity Curve" **4**, and "AfterT Curve" **3**.
- When controlling the TRITON Le's tone generator from an external MIDI device, select **PostMIDI**. The above-listed settings will affect the MIDI data that is received. These settings will also affect the data that is played back from the internal sequencer.
  Outgoing MIDI data will be handled with settings equivalent to "Key Transpose" **0**, "Velocity Curve" **4**, and "AfterT Curve" **3**.

☐ *Connecting an external MIDI sequencer or computer etc.*

You can play the TRITON Le's keyboard and record your performance on an external MIDI sequencer / computer (connected via a MIDI interface), and then play back the recorded performance to sound the TRITON Le's tone generator (i.e., using this instrument as an input keyboard and MIDI tone generator). To do this, connect the MIDI OUT and MIDI IN connectors of the TRITON Le and your external MIDI sequencer / computer to each other.



Local Control On settings

When connections are made as shown above, turn on the Echo Back function of the external MIDI sequencer or computer (so that data received at MIDI IN will be re-transmitted from MIDI OUT), and turn **off** the TRITON Le's **Local Control** setting (so that this instrument's keyboard and tone

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generator will be internally disconnected). When you play the keyboard of the TRITON Le, the musical data will be transmitted to the external MIDI sequencer or computer, and then echoed back to play the TRITON Le tone generator. In other words, by turning Local Control OFF, you can prevent notes from being sounded in duplicate, as would otherwise occur if a note were sounded by the TRITON Le's own keyboard and again by the data that was echoed-back.

If the arpeggiator function is on, playing the TRITON Le's keyboard will not cause the arpeggiator to operate, and only the musical data produced by playing the keyboard will be transmitted. The arpeggiator will operate only in response to the notes that are echoed-back and received at MIDI IN. In this way, turning off Local Control prevents the arpeggiator from operating in duplicate.
Use this setting when you wish to record on the external MIDI sequencer or computer only the notes that trigger the arpeggiator, and to use the echoed-back notes to operate the arpeggiator while monitoring your recording or during playback.

note If you want the note data produced by the arpeggiator to be recorded on the external sequencer / computer, set Local Control on, and turn off the Echo Back setting of the external sequencer / computer.

To turn **off** Local Control, the "Local Control On" (GLOBAL 2.1–1a) check box to **uncheck** it (☞p.128).

When using the TRITON Le by itself, leave Local Control turned on. (If this is **off** when this instrument is used by itself, playing the keyboard will not produce sound.)

■ Messages transmitted and received by this instrument

[...] indicates hexadecimal notation

□ *MIDI channels*

MIDI messages can be exchanged when the transmitting and receiving devices are set to the same MIDI channel. MIDI uses sixteen channels, numbered 1–16. The way in which channels are handled will differ depending on the mode.

Program mode, Sampling mode (if the EXB-SMPL option (sold separately) is installed)

- Transmission / reception is performed on the global MIDI channel*.

* The **global MIDI channel** is the basic channel that this instrument uses for MIDI transmission / reception, and is set by "MIDI Channel" (GLOBAL 2.1–1a).

Combination mode

- The global MIDI channel is used to transmit / receive messages for selecting a combination and turning effects on / off, and to transmit / receive exclusive data.
- The MIDI channel specified for each timbre (in COMBI 3.1–1a) is used to transmit / receive MIDI data for each timbre.
- The MIDI channel specified for the insert effect and master effects (in MIDI channel "Control Ch (control Channel)" (COMBI 7.1–2b, 7.2–1a, 7.2–1c)) is used to control dynamic modulation, and to control the pan and send 1 / 2 after the sound has passed through the insert effects.
- When you operate the keyboard or controllers of the TRITON Le, messages will be transmitted on the global MIDI channel, and will also be transmitted on the MIDI channel of any timbre whose "Status" (COMBI 3.1–1a) is set to **EXT** or **EX2**.
- Channel messages will be received if they match the MIDI channel of a timbre whose "Status" is set to **INT** (☞p.36 "Status" and "MIDI Channel").

Sequencer mode

- The global MIDI channel is used to transmit / receive exclusive data and for messages that switch effects on / off.
- MIDI data of each track is transmitted / received on the MIDI channel specified for each track (In Sequencer mode, this will be the settings of SEQ 3.1–1(2)a.)
- The MIDI channel specified for the insert effect and master effects (in SEQ 7.1–3b, 7.2–1a, 7.2–1c) is used to control dynamic modulation, and to control the pan and send 1 / 2 after the sound has passed through the insert effect.
- When you operate the keyboard or controllers of the TRITON Le, messages will be transmitted on the MIDI channel selected by "Track Select" (SEQ 1.1–1c). However, messages will be transmitted only if the track selected by "Track Select" has a "Status" of **BTH**, **EXT**, or **EX2**. (☞p.51 "Track Select"– MIDI)
- When Sequencer is played back, musical data of tracks whose "Status" is **BTH**, **EXT**, or **EX2** will be transmitted on the specified MIDI channels.
- Tracks whose "Status" is **INT** or **BTH** will receive channel messages of the matching MIDI channel (☞p.62 "Status" and "MIDI Channel").

□ *Note on / off*

Note-on [9n, kk, vv]
Note-off [8n, kk, vv]
(n: channel, kk: note number, vv: velocity)

When you play a note on the TRITON Le's keyboard, it will transmit note-on / off messages. When the arpeggiator is running, note-on / off messages will be transmitted by the arpeggiator. (If Local Control is off, the arpeggiator will not transmit note-on / off data. ☞p.231 "Local Control On settings")
However, most instruments do not receive or transmit note-off velocity, and neither does the TRITON Le.
Most devices do not transmit or receive note-off velocity, and the TRITON Le does not transmit or receive this data either.

□ *Program Change / Bank Select*

Changing the program / bank

Program change [Cn, pp]
(n: channel, pp: program number that allows 128 sounds to be selected)

- Programs 000–127 in banks A, B, C, and D correspond to program changes [Cn, 00]–[Cn, 7F].
- Programs 001–128 in banks G and g(d) correspond to program changes [Cn, 00]–[Cn, 7F].

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Bank select MSB (CC#0) [Bn, 00, mm],
Bank select LSB (CC#32) [Bn, 20, bb]
(n: channel, mm: bank number upper byte, bb: bank number lower byte)

- The internal banks that correspond to each bank select number will depend on the "Bank Map" setting (GLOBAL 1.1–2a). With the factory settings, this will be **GM**. (☞p.124 "Bank Map")

  Simply receiving a Bank Select message will not cause the program or bank to change. The program or bank will actually change when a Program Change message is received.

Program mode

- In PROG 1.1: Play, program change and bank select messages are transmitted and received on the global MIDI channel. These messages are not received in PROG 2.1: Ed–Basic – PROG 7.2: Ed–MasterFX.

Combination, Sequencer mode

- Program change and bank select messages can be received on the MIDI channel specified for each timbre / track to select programs on that timbre / track.
- When you select a combination, program change and bank select messages will be transmitted by timbres whose "Status" is **EXT** or **EX2**.
  In Sequencer mode, program change or bank select messages will be transmitted by tracks whose "Status" is **BTH**, **EXT**, or **EX2** when you select the "Program Select" (SEQ 1.1–2(3)a), when you select a song, or when you return to the beginning of a measure. (☞p.54 "Program Select"–MIDI)
- In Combination and Sequencer modes, transmission / reception can be switched on / off for each timbre / track. (☞p.41, 66 "Program Change").

Selecting combinations

You can use program change and bank select messages to select combinations in the same way that you select programs.

- Combinations 000–127 in banks A, B, and C correspond to program changes [Cn, 00]–[Cn, 7F].
- Similarly as for program banks, the internal banks that correspond to each bank select number will depend on the "Bank Map" setting (GLOBAL 1.1–2a). (☞p.124 "Bank Map")
- In COMBI 1.1: Play, program change and bank select messages are transmitted / received on the global MIDI channel. They are not received in COMBI 2.1: Ed–Prog / Mixer – COMBI 7.2: Ed–MasterFX.

note All program changes can be turned off in "MIDI Filter" (GLOBAL 2.1–1b).

As needed, you can independently turn all program changes on / off, specify whether or not incoming messages will be able to change combinations, and turn reception / transmission of bank select messages on / off.

- If "Combi (Combi Change)" (GLOBAL 2.1–1b) is unchecked, the combination will not change even if a program change on the global MIDI channel is received in COMBI 1.1: Play. In this case, the program of the timbre that matches the MIDI channel of the received message will change.
- If "Bank (Bank Change)" (GLOBAL 2.1–1b) is unchecked, bank select messages will not be transmitted or received (☞p.128 "MIDI Filter").

☐ *After touch*

Channel after touch [Dn, vv]
(n: channel, vv: value)

When you apply pressure to the keyboard after playing a note, an after touch effect will be applied, and Channel After Touch messages will be transmitted. When these messages are received, an after touch effect will be applied.

- After touch for the entire TRITON Le can be turned off in "AfterT (After Touch)" (GLOBAL 2.1–1b).
- In Combination and Sequencer modes, after touch can be switched on / off independently for each timbre / track (☞p.41, 66 "After Touch" COMBI / SEQ 4.1–1(2)a).

Polyphonic key pressure [An, kk, vv]
(n: channel, kk: note number, vv: value)

There is another type of after touch called Polyphonic Key Pressure, which allows after touch to be applied independently for individual keys. This message can be used as an alternate modulation source, but cannot be transmitted by the TRITON Le's keyboard. In order to use this message, it will have to be received from an external device, or recorded on your sequencer.

The after touch mentioned in this manual refers to Channel After Touch.

☐ *Pitch bender*

Pitch bend change [En, bb, mm]
(n: channel, bb: lower byte of the value, mm: upper byte of the value, together expressing a value of 16,384 steps where 8,192 [bb, mm = 00H, 40H] is the center value)

When this instrument's joystick is moved in the X axis (left / right), a pitch bend effect will be applied, and pitch bender messages will also be transmitted. When these messages are received, a pitch bend effect will be applied.

note The range of pitch change that is produced by pitch bend messages can also be adjusted via MIDI. (☞p.237 "Changing the pitch bend range")

☐ *Control change*

[Bn, cc, vv]
Transmitted and received as (n: channel, cc: control change no., vv: value)

Refer to "MIDI transmission when the TRITON Le's controllers are operated" (☞p.224) and "TRITON Le operations when control changes are transmitted / received" (☞p.228).

- Control changes can be turned on / off as a whole in "Ctrl Change (Control Change)" (GLOBAL 2.1–1b).
- In Combination and Sequencer modes, the COMBI / SEQ 4.1–4.4: Ed-MIDI Filter 1–4 settings allow transmission / reception of control changes to be individually turned on / off for each timbre / track. For the assignable controllers ([SW1], [SW2], REALTIME CONTROLS [1]–[4] knobs, Foot Pedal / Switch), MIDI filter settings will apply to the control change number to which each controller is assigned. "Other Control Change" applies to control changes that are not covered by the items of the other check boxes (☞p.42, 68).

note MIDI CC#00–CC#95 can be selected for the B-mode of REALTIME CONTROLS [1]–[4] knobs.

Selecting program / combination banks

Bank select (CC#00, CC#32)
☞p.232 "Program Change / Bank Select"

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Using the joystick to apply modulation

Modulation 1 depth (CC#01) [Bn, 01, vv]
When you move the TRITON Le's joystick in the +Y direction (away from yourself), Modulation 1 Depth messages will be transmitted. When these messages are received, the same effect will be applied as when the TRITON Le's joystick is operated. Normally this will apply a vibrato effect (pitch LFO).

- In Combination and Sequencer modes, transmission / reception can be switched on / off for each timbre / track (☞"JS+Y CC#01" COMBI / SEQ 4.2–1 / 2a).

Modulation 2 depth (CC#02) [Bn, 02, vv]
When you move the TRITON Le's joystick in the –Y direction (toward yourself), Modulation 2 Depth messages will be transmitted. When these messages are received, the same effect will be applied as when the TRITON Le's joystick is operated. Normally this will apply a wah effect (filter LFO).

- In Combination and Sequencer modes, transmission / reception can be switched on / off for each timbre / track. (☞"JS–Y CC#02" COMBI / SEQ 4.2–1 / 2a)

note Other manufacturers use this message for other purposes (e.g., breath controller, etc.)

Controlling the portamento effect

Portamento time (CC#05) [Bn, 05, vv]
When the above CC# is assigned as a B-mode function for one of the REALTIME CONTROLS [1]–[4] knobs, rotating that knob will transmit Portamento Time messages, and will modify the speed at which the portamento pitch changes. When this message is received, the result will be the same as when the controller is operated.

Portamento switch (CC#65) [Bn, 41, vv]
When the above CC# is assigned to "SW1," "SW2" or ASSIGNABLE SWITCH, operating that switch will transmit vv=127 [7F] for ON or vv=0 [00] for OFF, and the portamento effect will be switched on / off. When this message is received, the result will be the same as when the controller is operated. (vv of 63 [3F] or less will be OFF, and 64 [40] or greater will be ON.) (☞p.220 "SW1, SW2 Assign List")

- In Combination and Sequencer modes, transmission / reception of this message can be turned on / off independently for each timbre / track. ("Portamento SW CC#65" COMBI 4.1–2a, SEQ 4.1–3(4)a)
- In Sequencer mode, portamento time / switch messages will be transmitted by each track whose "Status" is **BTH**, **EXT**, or **EX2** when you set "Portamento" (SEQ 4.1–3(4)a), re-select a song or SMF, or return to the beginning of a measure. (☞p.63)

Controlling the volume

Volume (CC#07) [Bn, 07, vv]
When the above CC# is assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REALTIME CONTROL knob [1]–[4], operating that controller will transmit Volume messages, and the volume will change. When this message is received, the result will be the same as when the controller is operated.

Expression (CC#11) [Bn, 0B, vv]
When the above CC# is assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REALTIME CONTROL knob [1]–[4], operating that controller will transmit Expression messages, and the volume will change. When this message is received, the result will be the same as when the controller is operated.

The volume of the TRITON Le is determined by summing the value of the **Volume message** with the value of the **Expression message**.

If adjusting the Volume message does not increase the volume as you expect, or if there is no sound, transmit MIDI messages from an external device to reset the value of the Expression message (set vv to 127). In Sequencer mode, this will be reset when the "Location" of the song is moved to **001:01.000**.

- In Combination mode, Volume messages will be transmitted by each timbre whose "Status" is **EXT** or **EX2** when you re-select the combination.
- When you change the "Volume" setting (SEQ 1.1–4(5)) in Sequencer mode, or when you re-select the song or return to the beginning of the song in Sequencer mode, volume messages will be transmitted by each track whose "Status" is **BTH**, **EXT**, or **EX2**.

note Regardless of the "Status" settings, re-selecting a song, or returning to the beginning will reset the internal Volume value to the value specified by each track (the starting settings), and will reset the Expression value to the maximum.

note You can control the volume independently for each track. You will normally use Volume messages to set the initial volume level for each track (the starting settings), and use Expression messages to create changes in dynamics within the musical data of the song.

By using the universal exclusive Master Volume message, you can adjust the overall volume without changing the volume balance between timbres or tracks. (☞p.237 "About system exclusive messages")

Controlling panpot (stereo position)

Panpot (CC#10) [Bn, 0A, vv]
(vv: value, where 00 is far left, 64 is center, and 127 is far right)

When the above CC# is assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REALTIME CONTROLS knob [1]–[4], operating that controller will transmit Panpot messages, and the panning will change. When this message is received, the result will be the same as when the controller is operated.

- When you set the "Pan" (SEQ 1.1–4(5)) in Sequencer mode, or when you re-select the song or return to the beginning of the measure in Sequencer mode, Panpot messages (except for RND) will be transmitted by each track whose "Status" is **BTH**, **EXT**, or **EX2** (☞p.55).

Post insert effect panpot (CC#08) [Bn, 08, vv]
(vv: value, where 00 is far left, 64 is center, and 127 is far right)

When the above CC# is assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REALTIME CONTROLS knob [1]–[4], operating that controller will transmit Post Insert Effect Panpot messages, and the panning of the sound following the insert effect will change. When this message is received, the result will be the same as when the controller is operated.

- In Program and Sampling (when the EXB-SMPL option is installed) modes, this message is transmitted and received on the global MIDI channel. In Combination and Sequencer modes, this is transmitted and received on the MIDI channel specified for each insert effect.
- When you set "Pan (CC#8)" (SEQ 7.1–3a) in Sequencer mode, or when you re-select the song or return to the

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beginning of the measure in Sequencer mode, Post Insert Effect Panpot message will be transmitted by each track whose "Status" is **BTH**, **EXT**, or **EX2** (☞p.84).

Effect control

Effect control 1 (CC#12) [Bn, 0C, vv]
Effect control 2 (CC#13) [Bn, 0D, vv]
When the above CC# is assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REALTIME CONTROLS knob [1]–[4], operating that controller will transmit Effect Control 1/2 messages, and the specified dynamic modulation will be controlled. When this message is received, the result will be the same as when the controller is operated.
Although various types of control change can be selected as dynamic modulation sources, Effect Control 1 (CC#12) and 2 (CC#13) are dedicated for dynamic modulation.

Effect 1 depth (Send 2) (CC#91) [Bn, 5B, vv]
Effect 3 depth (Send 1) (CC#93) [Bn, 5D, vv]
When the above CC# is assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REALTIME CONTROL knob [1]–[4], operating that controller will transmit Effect 1 Depth (Send 2) or Effect 3 Depth (Send 1) messages, and the send level 1 or 2 to the master effects MFX1 or MFX2 will be controlled respectively. When this message is received, the result will be the same as when the controller is operated.

On the corresponding MIDI channels, this will simultaneously control the timbre/track setting as well as the setting following the insertion effect.

- In Combination and Sequencer, the actual send level of the timbre/track is determined by summing this value with the send 1/2 settings for each oscillator (PROG 7.1–1a). (☞p.26 "OSC Send 1/2," ☞p.46, p.84 "S1 (Send1(MFX1))," "S2 (Send2(MFX2))")
- When you adjust "S1 (Send1(MFX1))" or "S2 (Send2(MFX2))" (SEQ 7.1–1(2)a) in Sequencer mode, or when you re-select a song or return to the beginning of the measure in Sequencer mode, Send 1/2 will be transmitted by each track whose "Status" is **BTH**, **EXT**, or **EX2**. (☞p.84).

Effect 2 depth (IFX on/off) (CC#92) [Bn, 5C, vv]
Effect 4 depth (MFX1 on/off) (CC#94) [Bn, 5E, vv]
Effect 5 depth (MFX2 on/off) (CC#95) [Bn, 5F, vv]
Separately from the effect on/off settings in each mode, "FX SW" (GLOBAL 1.1–1b) allows you to turn off insert effect IFX and master effects MFX1 and MFX2. If you **check** "IFX Off," "MFX1 Off" or "MFX2 Off," the corresponding message will be transmitted with vv=0 [00]. If you **uncheck** these settings, the corresponding message will be transmitted with vv=127 [7F]. If you check these settings, the corresponding effect(s) will be turned off as a group. If you uncheck these settings, the on/off settings of each mode will be used. The same applies to reception. (vv of 00 is off, and 01 or greater is the original setting.) These messages are transmitted/received on the global MIDI channel. (☞p.27, p.28 "FX On/Off")

note These messages are defined simply for use in adjusting the effect levels, and may not have the same function on another instrument connected to the TRITON Le.

Using various controllers for control

Foot controller (CC#04) [Bn, 04, vv]
If the above CC# is assigned as the ASSIGNABLE PEDAL function, this message will be transmitted when the controller is operated.

- In Combination and Sequencer modes, transmission/reception of this message can be turned on/off independently for each timbre/track.
  ☞"Foot Pedal/Switch" (COMBI 4.4–2a, SEQ 4.4–3(4)a)

Knob modulation 1, 2, 3, 4 (CC#17, 19, 20, 21)
[Bn, 11, vv], [Bn, 13, vv], [Bn, 14, vv], [Bn, 15, vv]
If the above CC# are assigned to the B-mode of REALTIME CONTROLS [1]–[4] knobs, these messages will be transmitted when the knobs are operated.

- In Combination and Sequencer modes, transmission/reception of this message can be turned on/off independently for each timbre/track ("Realtime Control Knob1, 2, 3, 4" COMBI/SEQ 4.3).

Controller (CC#83) [Bn, 53, vv]
If the above CC# is assigned to the B-mode of REALTIME CONTROLS [1]–[4] knobs, this message will be transmitted when the knob is operated.

SW1 modulation (CC#80) [Bn, 50, vv]
SW2 modulation (CC#81) [Bn, 51, vv]
If the above CC# are assigned as the function of [SW1] or [SW2], operating the switch will transmit this message with vv=127 [7F] for ON, and vv=00 [00] for OFF. (These can also be set as the B-mode functions of the REALTIME CONTROL knobs [1]–[4].)

- In Combination and Sequencer modes, transmission/reception of these messages can be turned on/off independently for each timbre/track ("SW1/2" COMBI 4.4–1a, SEQ 4.4–1/2a)

Foot switch (CC#82) [Bn, 52, vv]
If the above CC# is assigned as the function of the ASSIGNABLE SWITCH, operating the switch will transmit this message with vv=127 [7F] for ON, and vv=00 [00] for OFF. (This can also be set as a B-mode function of the REALTIME CONTROL knobs [1]–[4].)

- In Combination and Sequencer modes, transmission/reception of this message can be turned on/off independently for each timbre/track ("Foot Pedal/Switch" COMBI 4.4–2a, SEQ 4.4–3(4)a).

When "Foot controller (CC#04)"–"Foot switch (CC#82)" are operated on the TRITON Le, the specified alternate modulation or dynamic modulation etc. will be controlled. When these messages are received, the result will be the same as if the controller had been operated. For "SW1 modulation (CC#80)"–"Foot switch (CC#82)," vv of 63 [3F] or less will be OFF, and 64 [40] or greater will be ON.

Damper pedal (CC#64) [Bn, 40, vv]
This message is transmitted when you operate a damper pedal (separately sold Korg DS-1H etc.) connected to the DAMPER jack, and the damper effect will be turned on/off. If the DS-1H is used, a half-damper effect can be applied.

- In Combination and Sequencer modes, transmission/reception of this message can be turned on/off independently for each timbre/track ("Damper CC#64" COMBI 4.1–2a, SEQ 4.1–3(4)a).

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Sostenuto (CC#66) [Bn, 42, vv]
If the above CC# is assigned as the function of the ASSIGNABLE SWITCH, operating the switch will transmit this message with vv=127 [7F] for ON, and vv=0 [00] for OFF, and the sostenuto effect will be turned on / off. When this message is received, the result will be the same as when the controller is operated (OFF for vv=63 [3F] or below, and ON for vv=64 [40] or above).

Soft pedal (CC#67) [Bn, 43, vv]
If the above CC# is assigned as the function of the ASSIGNABLE SWITCH, the soft pedal effect will be turned on / off. When this message is received, the result will be the same as when the controller is operated.

Controlling via the controllers of a connected MIDI instrument such as the TRITON

Ribbon Controller (CC#16) [Bn, 10, vv]
When a control change is received from the ribbon controller or other assigned controller of a MIDI instrument (such as the TRITON), the specified effect (e.g., alternate modulation or dynamic modulation) will be applied.

- In Combination or Sequencer modes, transmission and reception can be turned on / off for each timbre / track. ("Ribbon CC#16" COMBI 4.2–2a, SEQ 4.2–3(4)a)

Controller (CC#18) [Bn, 12, vv]
When the [VALUE] slider of MIDI instruments such as the TRITON, or a control change assigned to a controller is received, the specified alternate modulation or dynamic modulation effect will be applied.

Controlling the tone / envelope of a program

CC#70 control specific parameters of a program. For details on the program parameters that correspond to each control change, and how this instrument will respond in each mode when these are received, refer to "TRITON Le operations when control changes are transmitted / received" (☞p.228).

Low pass filter cutoff (CC#74) [Bn, 4A, vv]
Resonance level / High pass filter cutoff (CC#71) [Bn, 47, vv]
Filter EG intensity (CC#79) [Bn, 4F, vv]
Release time (CC#72) [Bn, 48, vv]
These messages are transmitted when you operate this instrument's REALTIME CONTROLS [1]–[4] knobs in A-mode. (They can also be set as B-mode functions.)

Sustain level (CC#70) [Bn, 46, vv]
Attack time (CC#73) [Bn, 49, vv]
Decay time (CC#75) [Bn, 4B, vv]
LFO 1 speed (CC#76) [Bn, 4C, vv]
LFO 1 depth (pitch) (CC#77) [Bn, 4D, vv]
LFO 1 delay (CC#78) [Bn, 4E, vv]
These messages are transmitted when assign the above CC# to the REALTIME CONTROLS [1]–[4] knobs in B-mode and operate them.

When you operate these, the corresponding program parameters will be controlled, and the sound and envelope will change. When these messages are received, the result will be the same as when the controller is operated. (When the message has a value vv=64 [40], the setting will have the value that was set by the program parameter.)

- In Combination and Sequencer modes, transmission / reception can be turned on / off independently for each timbre / track ("Realtime Control Knob1, 2, 3, 4" COMBI 4.3–1a, SEQ 4.3).

note In Program mode, the corresponding program parameters will be temporarily edited by these messages. You can Write the program to save the modified state (except for certain parameters). The Write operation can also be performed by a MIDI exclusive Program Write Request message, in addition to the usual method of using the TRITON Le's switches. When you write the data, the values of the corresponding program parameters will be rewritten.

note The results of receiving these messages will depend on the instrument. The operation may be different when a device other than the TRITON Le is connected.

Silencing all notes on a specific channel

All note off (CC#123) [Bn, 7B, 00] (value 00)
When this is received, all currently-sounding notes on that channel will be turned off (as though the keys had been released). However, the release portion of the notes will remain.

All sound off (CC#120) [Bn, 78, 00] (value 00)
When this is received, all currently-sounding notes on that channel will be silenced. While the All Note Off message allows the release portion of the notes to remain, the All Sound Off message will silence the notes immediately.

However, these messages are provided for emergency use, and are not something that you will use while performing.

Resetting all controllers on a specific channel

Reset all controllers (CC#121) [Bn, 79, 00] (value 00)
When this is received, the value of all controllers on that channel will be reset.

☐ *Using RPN to edit*

RPN (Registered Parameter Number) is a type of message that allows settings to be made in a way that is common between instrument manufacturers. (NRPN (Non-registered Parameter Numbers) and exclusive messages can be freely used in non-compatible ways by different manufacturers and models of instrument.)

RPN messages can be used for editing with the following procedure.

① Use RPN MSB (CC#101) [Bn, 65, mm] and RPN LSB (CC#100) [Bn, 64, rr] (n: channel, mm, rr: upper and lower bytes of the parameter number) messages to select the parameter.

② Use data entry MSB (CC#6) [Bn, 06, mm] and data entry LSB (CC#38) [Bn, 26, vv] (n: channel, mm, vv: upper and lower bytes of the value, together expressing 16,384 levels) to specify the value.

③ You can use data increment (CC#96) [Bn, 60,00] or data decrement (CC#97) [Bn, 61, 00] (n: channel, value is fixed at 00) to change the value in steps of one.

The TRITON Le can receive the following three RPN messages (tuning, transpose, and pitch bend range).

Tuning

RPN fine tune [Bn, 65, 00, 64, 01]
This RPN message can be used to adjust the detuning for a program or timbre (in Combination mode), or for a track (in Sequencer mode).

The procedure is as follows.

① [Bn, 65, 00, 64, 01]: Select RPN parameter 01.

② [Bn, 06, mm, 26, vv]: Use data entry to set the value. A

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value of 8192 [mm, vv=40, 00] is center, 0 [mm, vv=00, 00] is -100 cents, and 16383 [mm, vv=7F, 7F] is +99 cents.

note You can use the universal exclusive Fine Tune message to adjust the overall tuning that corresponds to the "Master Tune" (GLOBAL 1.1–1a) parameter. (☞p.237 "About system exclusive messages")

Transposing

RPN coarse tune [Bn, 65, 00, 64, 02]
This RPN message can be used to adjust the transposition for a program or timbre (in Combination mode), or for a track (in Sequencer mode).

The procedure is as follows.

① [Bn, 65, 00, 64, 02]: Select RPN parameter 02.
② [Bn, 06, mm, 26, vv]: Use data entry to set the value. Normally only the upper byte is used.

A value of 8192 [mm, vv=40, 00] is center, 6656 [mm, vv=34, 00] is -12 semitones, and 9728 [mm, vv=4C, 00] is +12 semitones.

note You can use the universal exclusive Coarse Tune message to adjust the overall tuning that corresponds to the "Key Transpose" (GLOBAL 1.1–1a) parameter. (☞p.237 "About system exclusive messages")

Changing the pitch bend range

RPN pitch bend range [Bn, 64, 00, 65, 00]
This RPN message can be used to adjust the pitch bend range for a program or timbre (in Combination mode) or for a track (in Sequencer mode).

The procedure is as follows.

① [Bn, 65, 00, 64, 00]: Select RPN parameter 00.
② [Bn, 06, mm, 26, vv]: Use data entry to set the value. Normally only the upper byte is used.

A value of 0 [mm, vv=00, 00] is +00, and a value of 1536 [mm, vv=0C, 00] is +12 (one octave). Although it is possible to set a negative value for a timbre / track, only positive values can be set using RPN messages.

☐ *Controlling the arpeggiator (NPRN)*

Arpeggiator operations can be controlled using NRPN (Non Registered Parameter Number) messages. NRPN messages can be freely used in non-compatible ways by different manufacturers and models of instrument.

The procedure for using NRPN messages is the same as for RPN, but you will use NRPN MSB (CC#99) [Bn, 63, mm] and NRPN LSB (CC#98) [Bn, 62, rr] messages (n: channel, mm, rr: upper and lower bytes of the parameter number) to specify the parameter.

NRPN arpeggiator on / off
[Bn, 63, 00, Bn, 62, 02, Bn, 06, mm]
This message will be transmitted when you press the [ARP ON / OFF] key. When the switch is turned ON the data will be mm=127 [7F], and when turned OFF the data will be mm=0 [00], and the arpeggiator will be turned on / off accordingly.

Similarly, the arpeggiator will be turned on / off when this message is received. (ON when mm is 64 [40] or greater, and OFF when 63 [3F] or less.)

NRPN arpeggiator gate control
[Bn, 63, 00, Bn, 62, 0A, Bn, 06, mm]
This message will be transmitted when you operate the [ARP-GATE] knob (REALTIME CONTROLS [2] knob in C-mode), and the arpeggiator gate will change. The same effect will be applied when this message is received.

NRPN arpeggiator velocity control
[Bn, 63, 00, Bn, 62, 0B, Bn, 06, mm]
This message will be transmitted when you operate the [ARP-VELOCITY] knob (REALTIME CONTROLS [3] knob in C-mode), and the arpeggiator velocity will change. The same effect will be applied when this message is received.

☐ *About system exclusive messages*

Since the way in which these messages are used is left up to each manufacturer, they are mainly used to transmit and receive sound data and editing data for parameters that are unique to a particular instrument. the TRITON Le's system exclusive message format is [F0, 42, 3n, 63, ff, ... F7]

F0: exclusive status
42: Korg ID
3n: [n=0–F] global MIDI channel 1–16
63: Future model ID
ff: function ID (type of message)
– ...
F7: end of exclusive

note To obtain a copy of the "MIDI Implementation" which includes MIDI exclusive format information, please contact your Korg distributor.

Universal system exclusive

Certain of the system exclusive messages are publicly defined for a specific use, and these are called universal system exclusive messages.
The TRITON Le uses the following six universal system exclusive messages.

Inquiry message request [F0, 7E, nn, 06, 01, F7]
Inquiry message [F0, 7E, nn, 06, 02, (nine bytes), F7]
When an inquiry message request is received, this instrument will respond by transmitting an inquiry message that means "I am a Korg Future instrument, with system version ..."

GM system on [F0, 7E, nn, 09, 01, F7]
When this message is received in Sequencer mode, this instrument will be initialized for GM playback.

Master volume [F0, 7F, nn, 04, 01, vv, mm, F7]
(vv: lower byte of the value, mm: upper byte of the value, together indicating 16384 steps)

This message is transmitted if you assign **Master Volume** as the function of the ASSIGNABLE PEDAL or as a B-mode function of a REALTIME CONTROLS [1]–[4] knob and operate the controller. This will adjust the overall volume balance without changing the relative volume balance between timbres / tracks. When this message is received, the result will be the same as when the controller is operated.

Master balance [F0, 7F, nn, 04, 02, vv, mm, F7]
(vv: lower byte of the value, mm: upper byte of the value, together indicating 16384 steps, where 8192 is the default position, and lower values will move the sound toward the left)

When this is received, the overall panning will be adjusted without changing the relative panning between timbres / tracks.

Master fine tuning [F0, 7F, nn, 04, 03, vv, mm, F7]
(A value of 8192 [mm, vv=40, 00] is center, 4096 [mm, vv=20, 00] is –50 cents, and 12288 [mm, vv=60, 00] is +50 cents.)

When this is received, "Master Tune" (GLOBAL 1.1–1a) parameter will be set.

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Master coarse tuning [F0, 7F, nn, 04, 04, vv, mm, F7]
(Normally only the upper byte mm is used. A value of 8192 [mm, vv=40, 00] is center, 6656 [mm, vv=34, 00] is –12 semitones, and 9728 [mm, vv=4C, 00] is +12 semitones.)

When this is received, "Key Transpose" (GLOBAL 1.1–1a) parameter will be set.

Transmitting sound settings data (Data Dump)

Data for programs, combinations, drum kits, user arpeggio patterns, global settings, and sequencer data can be transmitted as MIDI exclusive messages. The operation of sending this system exclusive data to an external device is called a "**data dump**."

By performing a data dump, you can store the TRITON Le's sounds and settings on an external device, or rewrite the sounds and settings of another Future instrument.

There are the following three types of data dump.

- When you use the utility manu command "Dump" (GLOBAL 2.1–1c) to dump data, various types of internal memory data will be transmitted. If this data is received by the TRITON Le, the data will be written directly into internal memory, and it will not be necessary to perform the Write operation. (☞p.129, 130 "Transmission," "Reception")
- If "Exclusive" (GLOBAL 2.1–1b) setting is checked, selecting a combination in COMBI 1.1: Play will transmit data for one combination. Selecting a program in PROG 1.1: Play will transmit data for one program.

  This data is the edit buffer data for the currently selected combination or program. If this data is received by the TRITON Le, the data will be written into the edit buffer, so if you wish to save it to internal memory, you will need to perform the Write operation. The Write operation can also be performed by a MIDI exclusive Program Write Request or Combination Write Request message, in addition to the usual method of using the TRITON Le's switches. (☞BG p.41 "Saving data")
- If "Exclusive" (GLOBAL 2.1–1b) setting is checked, data will also be dumped in response to a Dump Request message. This data is transmitted and received on the global MIDI channel.

Editing sounds etc.

By using various MIDI exclusive data dumps, you can rewrite all programs or an individual program. By using parameter change messages, you can edit individual parameters as follows.

Parameter changes

- In Program mode, all parameters other than the program name can be edited. Performance editor parameters are included.
- In Combination mode, parameters other than the combination name can be edited.

Drum kit parameter change / User arpeggio pattern parameter change

- In Global mode, you can edit drum kits and user arpeggio patterns.

Since the other global parameters or Sequencer mode data cannot be edited, you will use data dumps to transfer this data. Data dumping of Sampling mode data is not supported.

The global MIDI channel is used to transmit and receive this data.

First check "Enable Exclusive" (GLOBAL 2.1–1b), so that exclusive data can be transmitted and received. When you change modes on the TRITON Le, a mode change message will transmitted. When you change programs or combinations, the parameters for one program or one combination will be transmitted together with the program change. When you edit individual parameters, parameter change, drum kit parameter change, or user arpeggio pattern parameter change messages will be transmitted.

When these messages are received, the same editing operation will be performed as on the transmitted device.

After MIDI exclusive data has been received and processed, a Data Load Completed message will be transmitted. The control master device must not transmit the next message until this message is received (or until a sufficient interval of time has elapsed).

When you change programs or combinations, or use parameter changes to edit, the changes will affect the data in the edit buffer and will not be stored in internal memory unless you Write, so that the changes will be lost if you re-select the program or combination. The Write operation can be performed by a MIDI exclusive Program Write Request or Combination Write Request message, in addition to the usual method of using this instrument's switches. (☞BG p.41 "Saving data")

It is not necessary to write a song, but it will not be backed up when the power is turned off. If you wish to keep the data, save it on external media before turning off the power. (☞BG p.45 "Saving on external media")

☐ *If notes are "stuck"*

If for some reason, notes become "stuck" and will not stop sounding, you can usually stop the sound by changing the mode. If notes played via MIDI are stuck, you can disconnect the MIDI cable.

MIDI transmits a message called Active Sensing [FE] at regular intervals. A device that receives this message will be aware that an external MIDI device is transmitting to it. Subsequently, if no MIDI messages are received for a certain interval of time, the receiving device will decide that the connection has been broken, and will turn off any notes that had been sounded via MIDI and reset its controller values.

☐ *Playing the TRITON Le multi-timbrally from an external device*

The TRITON Le can be connected to an external device and played multi-timbrally in the following ways.

- MIDI messages from the external device can play a combination (8-part multi-timbral performance). You can change the overall settings (programs, levels, and effects) by using program change messages to switch combinations.
- MIDI messages from the external device can be used to play a song (16-part multi-timbral performance). Overall settings (programs, levels, effects etc.) can be changed by using a Song Select message to switch songs. (Song Select messages can be received if "MIDI Clock": GLOBAL 2.1–1a is set to **External**.)
- MIDI Clock messages from the external device can be used to make the TRITON Le playback a song (set "MIDI Clock" to **External**, and run this instrument's sequencer). You can change the overall settings (programs, levels, effects) by using song select messages to switch songs.

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☐ *Synchronizing the playback of the arpeggiator or sequencer*

The choice of whether the TRITON Le will be the master (the controlling device) or the slave (the controlled device) is made by "MIDI Clock" (GLOBAL 2.1–1a).

Using this instrument as master and the external MIDI device as slave

Connect the MIDI OUT connector of this instrument to the MIDI IN connector of the external MIDI device. (☞p.231)

- When you set "MIDI Clock" to **Internal**, this instrument will be the master device, and will transmit MIDI timing clock messages.

  Arpeggiator: The tempo can be controlled from this instrument. Simultaneously, the performance of the arpeggiator will be transmitted via MIDI. (In Combination, Sequencer modes, data will be transmitted by timbres / tracks whose "Status" is **BTH**, **EXT**, or **EX2**.) An external tone generator connected to MIDI OUT will sound, and the tempo of an external sequencer can be controlled.

  Sequencer: The musical data can be played back and controlled on the TRITON Le. Simultaneously, the sequencer playback will be transmitted via MIDI from tracks whose "Status" is **BTH**, **EXT**, or **EX2**. An external tone generator connected to MIDI OUT will sound, and the tempo of an external sequencer can be controlled.

  However, since exclusive data cannot be recorded on the TRITON Le's sequencer, you can use the "Dump Sequencer" (GLOBAL 2.1–1c) utility menu command if the slave device is the TRITON Le. If the slave device is another model, you can use the TRITON Le's Media mode data filer function ("Receive and Save MIDI Exclusive," "Load and Transmit MIDI Exclusive Data"). (☞p.144, 150)

Using the external MIDI device as master and this instrument as slave

Connect the TRITON Le's MIDI IN connector to the MIDI OUT connector of the external MIDI device. (☞p.231).

- When you set "MIDI Clock" to **External**, the TRITON Le will be the **slave** device.

  Arpeggiator: The tempo will follow the MIDI timing clock. If you playback the external sequencer, the TRITON Le's arpeggiator will synchronize to the external timing clock. (☞BG p.107)
  Even if "MIDI Clock" is **External** and the TRITON Le is being controlled from the external device, the performance of the arpeggiator performance will still be transmitted via MIDI. (In Combination and Sequencer modes, the arpeggiator performance will be transmitted from timbres / tracks whose "Status" is **BTH**, **EXT**, or **EX2**.)

  Sequencer: The tempo will follow the MIDI timing clock. You can play back an external sequencer, and synchronize the sequencer to the MIDI timing clock that it transmits. Even if "MIDI Clock" is set to **External** and the TRITON Le is being controlled from an external device, musical data will be transmitted by tracks whose "Status" is **BTH**, **EXT**, or **EX2**.

☐ *Recording musical data from an external device*

There are two ways in which you can play back an external sequencer and record its playback on this instrument.

- Set "MIDI Clock" (GLOBAL 2.1–1a) to **Internal**, begin recording, and then start the external sequencer. With this method, the MIDI messages will be recorded without the two devices being synchronized. Since the incoming musical data will simply be recorded, this method allows the performance to be reproduced faithfully, but since measure divisions etc. will not be kept track of, this method is not suitable if you intend to edit the data later.
- If you set "MIDI Clock" to **External**, the start of recording and the tempo etc. will all be under the control of the external sequencer. Since the two devices will be synchronized during the recording process, measure divisions etc. will be accurately preserved. (You will need to set the time signature before recording.) However, tempo changes during the performance will not be recorded, so you will have to insert any tempo changes later. For normal multi-track recording, you will use this method. (☞BG p.80 "Multi (multitrack recording)")

☐ *Recording the MIDI output of this instrument's controllers, arpeggiator, and internal sequencer on an external sequencer / computer*

If you wish to record the MIDI output of the TRITON Le's controllers, arpeggiator, and internal sequencer on an external sequencer or computer and use the TRITON Le as the monitoring and playback tone generator while you record, you must turn off the TRITON Le's Local Control setting ("Local Control On" GLOBAL 2.1–1a), and set your external sequencer / computer for echo-back (a function by which the data received at MIDI IN is retransmitted without change from MIDI OUT) so that the data from the TRITON Le's controllers, arpeggiator and internal sequencer will not be applied in duplicate to the tone generator.

Using the REALTIME CONTROLS [1]–[4] knobs to record MIDI control changes on an external MIDI sequencer / computer

Set the TRITON Le to **Local Control Off**. Set the external MIDI sequencer / computer to **Echo Back On**. With these settings, recording and playback will occur correctly, and the control changes will not be applied to the tone generator in duplicate.

Recording the arpeggiator or RPPR function on an external MIDI sequencer / computer

When the arpeggiator is **on**, playing the keyboard or operating the controllers of the TRITON Le will operate and control the arpeggiator. The arpeggiator will operate and be controlled in the same way in response to MIDI messages received at MIDI IN. The MIDI messages generated from the arpeggiator will be transmitted from MIDI OUT according to the Local Control setting ("Local Control On" GLOBAL 2.1–1a) as described below.

In Sequencer mode, when the RPPR function is on, playing the keyboard will cause RPPR to operate. Similarly, the RPPR function will also operate in response to notes received on the MIDI channel of the track selected by "Track Select" (SEQ 1.1–1c). Notes will be transmitted by RPPR

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from MIDI OUT according to the local control setting (“Local Control On”) as described below.

Local Control On: Notes from the arpeggiator or RPPR will be transmitted from MIDI OUT. Normally you will use this setting.

Local Control Off: Notes from the arpeggiator or RPPR will not be transmitted from MIDI OUT. The arpeggiator or RPPR will only sound the notes (on this instrument).

Setting example 1
Record the note messages generated by the arpeggiator or RPPR function on the external MIDI sequencer/computer
Turn on this instrument’s arpeggiator or RPPR function. Set this instrument to **Local Control On**.
Turn Local Control On for this instrument.
Turn **Echo Back Off** on your external sequencer / computer. By turning echo back off, you will prevent the arpeggiator or RPPR function from performing duplicate processing on the monitored notes during recording.
During playback, turn off the arpeggiator and RPPR functions of this instrument.

Setting example 2
Use the external MIDI sequencer/computer to record only the notes that trigger the arpeggiator or RPPR function, and operate this instrument’s arpeggiator or RPPR function for monitoring while recording, and during playback.
Turn on the TRITON Le’s arpeggiator or RPPR function. Set the TRITON Le to **Local Control Off**. The note messages generated by the arpeggiator or RPPR function will not be output. On your external MIDI sequencer / computer, turn **echo back on**. With these settings, the data will be recorded and played correctly, and the arpeggiator or RPPR function will not be applied in duplicate.

☐ *About GM / GS / XG*

the TRITON Le supports the GM standard. It also supports the GM sound map (including bank select) with 128 programs and 9 drum programs provided in ROM banks G, and g(d). (g(d) contains drum programs.)

GM is a standard that ensures basic compatibility of sounds etc. between different GM-compatible instruments made by different manufacturers, but you need to be aware of the following.

- The GM System On message is received only in Sequencer mode. (“GM Initialize” SEQ 1.1–1d)

Roland GS and Yamaha XG are specifications by which these respective manufacturers have extended the GM standard.

the TRITON Le automatically converts the GS / XG sound maps to the GM sound map, and supports some of their messages. In Sequencer mode etc., GS / XG music data can be played back.

Since the TRITON Le does not support all of the GS / XG sound maps or messages, some data may not be played back correctly.

If you wish to play music data from an external GM / GS / XG compatible sequencer, or to load it into a pattern (multi), set “Bank Map” (GLOBAL 1.1–2a) to **GM**.

Converting the GS / XG bank / program maps to the GM2 bank / program map

- When bank select / program change messages used by GS / XG are received, they will automatically be converted to the G, g(d) bank / program map of this instrument.
- The same conversion is performed when a SMF is loaded into a song in Media mode.

For banks that are used in common by GS / XG, GS Reset / XG System ON will be received to automatically convert to the optimal bank / program map for each.

Support for GS / XG part mode exclusive messages

- In Sequencer mode when GS / XG part mode exclusive messages Drum or MDrm 1–4 are received, bank g(d) (GM drum bank) will be selected for the specified track. Until this part mode state is defeated, bank select messages will no longer be received for the specified track.
- When an SMF is loaded into a song in Media mode, any bank select messages in a track that is set to a part mode of Drum or MDrm 1–4 will be ignored, and will not be loaded.

Support for NRPN messages used in GS / XG music data

The following NRPN messages can be received to modify the sound.

Vibrato Rate	[Bn, 63, 01, Bn, 62, 08, Bn, 06, mm]
Vibrato Depth	[Bn, 63, 01, Bn, 62, 09, Bn, 06, mm]
Vibrato Delay	[Bn, 63, 01, Bn, 62, 0A, Bn, 06, mm]
Filter Cutoff	[Bn, 63, 01, Bn, 62, 20, Bn, 06, mm]
Resonance	[Bn, 63, 01, Bn, 62, 21, Bn, 06, mm]
EG Attack Time	[Bn, 63, 01, Bn, 62, 63, Bn, 06, mm]
EG Decay Time	[Bn, 63, 01, Bn, 62, 64, Bn, 06, mm]
EG Release Time	[Bn, 63, 01, Bn, 62, 66, Bn, 06, mm]
Drum Filter Cutoff	[Bn, 63, 14, Bn, 62, kk, Bn, 06, mm]
Drum Filter Resonance	[Bn, 63, 15, Bn, 62, kk, Bn, 06, mm]
Drum EG Attack Time	[Bn, 63, 16, Bn, 62, kk, Bn, 06, mm]
Drum EG Decay Time	[Bn, 63, 17, Bn, 62, kk, Bn, 06, mm]
Drum Coarse Tune	[Bn, 63, 18, Bn, 62, kk, Bn, 06, mm]
Drum Fine Tune	[Bn, 63, 19, Bn, 62, kk, Bn, 06, mm]
Drum Volume	[Bn, 63, 1A, Bn, 62, kk, Bn, 06, mm]
Drum Panpot	[Bn, 63, 1C, Bn, 62, kk, Bn, 06, mm]*
Drum Rev Send (Send2)	[Bn, 63, 1D, Bn, 62, kk, Bn, 06, mm]
Drum Cho Send (Send1)	[Bn, 63, 1E, Bn, 62, kk, Bn, 06, mm]

kk: Drum Inst No. ([0C...6C] corresponds to C0...C8)
* [00, 01...7f] corresponds to Random, L000...R127)

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☐ *About standard MIDI files*

Standard MIDI files (SMF) make it possible for different computer programs or musical instruments made by different manufacturers to exchange time-based MIDI data. Each standard MIDI file contains one song. This instrument supports **format 0 (type 0)** in which all of the MIDI data is combined into one track, and **format 1 (type 1)** in which the data is separated by track.

When a SMF is loaded into a song in Media mode, the program bank that is selected will differ depending on "Bank Map" (GLOBAL 1.1–2a) setting. When playing / loading SMF data that conforms to the GM / GS / XG specifications, set "Bank Map" to **GM**.

Sequencer mode

In Media mode when you convert a song into a Standard MIDI File and save it, you can choose either **format 0** or **format 1**.

- If the TRITON Le's song data that was saved as a format 1 SMF file is loaded into another device, the track configuration may be different than it was before being saved. This is because tracks that contain no musical data are omitted, and the remaining tracks are moved into the unused tracks. This will not affect the playback itself.
- If song data that was saved by another device as a format 1 SMF file is loaded into this instrument, the track configuration may be different than it was before being saved. This is because tracks that contain no musical data are omitted, and the remaining tracks are moved into the unused tracks. This will not affect the playback itself.

When exchanging sequence data between two Future instruments, we recommend that you save the sequence data in this instrument's native format ("Save SEQ"). When sequence data is saved in this instrument's native format, all of the settings and patterns unique to this instrument will be saved, which will ensure a higher level of reproducibility than when the data is saved as a Standard MIDI File ("Save to Std MIDI File").

When a GM System On message is received, the system will be initialized for GM playback. ("GM Initialize" ☞p.54)

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Various messages

A

Are you sure?

Meaning: This message asks you to confirm execution. To execute press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

C

Can’t calibrate

Meaning: Calibration could not be performed correctly.
Action: Try again.

Can’t open pattern Continue ?

Meaning: When you finished recording or editing, it was not possible to allocate enough memory to open the pattern that was Put into the track. (When it must be opened automatically.) If you press the [F8] (“OK”) key, the pattern data will be deleted, and the recorded or edited content will be saved. If you press the [F7] (“Cancel”) key, the recorded or edited content will be discarded.

Completed

Meaning: Execution of the command ended normally.

D

Destination and source are identical

Meaning: When copying or bouncing, the same cue list, song, track or pattern was selected for both the source and destination.
Action: Select a different cue list, song, track, or pattern for the source and destination.

Destination from-measure within the limits of source

Meaning: When executing the Move Measure command for all tracks or within the same track, the specified destination measure is within the source range.
Action: Set a destination measure that is outside of the source range.

Destination is empty

Meaning: When editing, the track or pattern that was specified as the destination contains no musical data.
Action: Select a track or pattern that contains musical data.

Destination measure is empty

Meaning: The measure that was specified as the destination contains no data.
Action: Specify a destination measure that contains data.

Destination multisample already exists

Meaning: A multisample already exists at the destination (save location) multisample.
Action: Either delete the multisample at the destination (save location), or change the save destination multisample number.

Destination multisample and source multisample are identical

Meaning: The same multisample is selected for the source and destination.
Action: Select different multisamples for the source and destination.

Destination sample already exists

Meaning: A sample already exists at the destination (save location).
Action: Either delete the sample at the destination (save location), or change the save destination sample number.

Destination sample data used in source sample

Meaning: Since the sample data at the destination (save location) is also used by the source sample, it cannot be overwritten.
Action: Without using Overwrite, specify a different sample for the destination (save location).

Destination sample is empty

Meaning: The sample for editing is empty.

Destination song is empty

Meaning: The song that was specified as the copy destination or bounce destination does not exist.
Action: Execute the Create New Song command in the dialog box that appears when a new song is selected before copying or bouncing.

Directory is not empty. Cleanup directory Are you sure?

Meaning: You are attempting to delete a directory that still contains files or sub-directories. If you press the [F8] (“OK”) key, the directory will be deleted along with all files or sub-directories that it contains. To cancel without deleting, press the [F7] (“Cancel”) key.

E

Error in formatting medium

Meaning: An error occurred while performing a physical format (full format) or high-level format (quick format) of the media.
Action: Use other media.

Error in reading from medium

Meaning: An error occurred while reading data from a media.
Action: Execute the reading operation once again. If the same error occurs, it is possible that the data on the media has been damaged.

Error in writing to medium

Meaning: An error occurred while writing data to a media. (Verify error)
Action: It is possible that the media has been physically damaged. Try another media. Avoid using the media that produced the error.

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F

File already exists

Meaning: When executing a Create Directory or File Rename operation, a directory or file of the same name already exists on the media.

Meaning: When executing the Media mode utility menu command “Copy” without using wild cards, the copy destination contained a file of the same name as the copy source.

Meaning: When you executed the Media mode utility “Save Sampling Data” with a setting of All, All Multisamples, All Samples, or One Multisample, a directory with the same name as the directory that the TRITON Le attempted to create already existed on the media.

Action: Either delete the existing directory or file, or specify a different filename.

File contains unsupported data

Meaning: For an AIFF file etc., you attempted to load a file format that the TRITON Le does not support.

Action: If possible, use a computer etc. to convert the data into a format supported by the TRITON Le, and load it.

File is read-only protected

Meaning: You attempted to write to a file or to delete a file that had a read-only attribute.

Meaning: You attempted to save a file to a SmartMedia that contained a read-only file of the same name.

Action: Save the file with a different name.

File unavailable

Meaning: You attempted to load or open a file whose format was incorrect.

File/path not found

Meaning: When loading a sample file in Media mode, the file name specified in the dialog box for selecting a directory hierarchy or other media did not exist in the specified location.

Meaning: When executing the Media mode utility menu command “Delete,” the specified file did not exist.

Meaning: When executing the Media mode utility menu command “Copy” and you used a wild card to specify the copy file name, the specified file was not found. Alternatively, the length of the copy source path name exceeded 76 characters.

Meaning: In Media mode when you used the [F6] (“Open”) key to open a directory, the path length including the selected directory name exceeded 76 characters.

Action: Check the file or directory.

Front sample data used in rear sample Can’t overwrite

Meaning: When executing the Sampling mode function Sample Edit “Link,” the sample data of the front sample was also used by the rear sample, and thus could not be overwritten.

Action: Do not use Overwrite; specify a different sample as the save destination.

I

Illegal file description

Meaning: The filename that you specified when saving a file or creating a directory contained invalid characters.

Action: Change the filename you are specifying. Filenames not permitted by MS-DOS cannot be used as a filename.

Illegal SMF data

Meaning: You attempted to load a file that was not a Standard MIDI File.

Illegal SMF division

Meaning: You attempted to load a Standard MIDI File that was timecode-based.

Illegal SMF format

Meaning: You attempted to load a Standard MIDI File of a format other than 0 or 1.

M

Master Track can’t be recorded alone

Meaning: When realtime-recording a single track, you attempted to begin recording with the master track as the current track.

Action: Begin recording with a track 1–16.

Measure size over limit

Meaning: When loading a Standard MIDI File, the number of events in a measure exceeded the maximum (approximately 10,000 events).

Meaning: The attempted edit operation would cause the maximum number of events in a measure (approximately 10,000) to be exceeded.

Action: Use event editing etc. to delete unwanted data.

Measure number over limit

Meaning: The attempted edit operation would cause the track length to exceed 999 measures.

Action: Delete unnecessary measures.

Media not formatted

Meaning: When you attempted to perform a high-level format (quick format) of media, the media had not been physically formatted yet.

Action: Execute the Media mode utility menu command “Format” to physically format the media (full format).

Medium changed

Meaning: When executing the Media mode Utility command “Copy,” the media was exchanged or ejected, and it was not possible to copy between separate media on the same drive.

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Medium write protected

Meaning: The SmartMedia or other media to which you attempted to save is write-protected.

Action: Turn off write protect on the media and execute the command once again.

Memory full

Meaning: In Sequencer mode when editing a song, track or pattern, the total data of all songs has used up all of the sequence data memory, and further editing is not possible.

Action: Delete other song data etc. to increase the amount of free memory.

Meaning: While realtime recording in Sequencer mode, there is no more free memory to accommodate the recorded data, so recording has been forcibly halted.

Action: Delete other song data etc. to increase the amount of free memory.

Meaning: In Media mode when loading a Standard MIDI File, the sequence memory has filled up.

Action: Delete song data. (If necessary, save the data before deleting it.)

Memory overflow

Meaning: In Media mode when using "Save Exclusive" to receive exclusive data, the sequence memory has filled up.

Action: If you are receiving two or more sets of exclusive data, transmit them separately to this instrument.

Meaning: In Media mode, you attempted to load more sample waveform data than there was free memory capacity.

Action: In Sampling mode, execute Delete sample to create free space in the sample waveform data area, and re-load the data.

Memory protected

Meaning: The internal program, combination, song, or drum kit is protected.

Action: In Global mode, turn off write-protect, and execute the write or load operation once again.

Multisample L and R are identical

Meaning: Since the destination (save location) L and R multisample numbers are the same, the editing operation could not be executed.

Action: Select a different multisample number for the L and R of the destination (save location).

N

No data

Meaning: When loading a Standard MIDI File, the file contained no events.

Meaning: When you executed "Export Samples as AIFF/WAVE" for Samples in One Multisample, there were no samples.

Action: Create sample data.

No medium

Meaning: When executing a command in Media mode, the media that was the object of the operation is not inserted.

Action: Insert the media.

No recording track specified

Meaning: When performing realtime multi-track recording, you attempted to begin recording with no tracks set to REC.

Action: Set the desired tracks for recording to REC.

No Sampling Upgrade Installed

Meaning: This will be displayed if you press the [SAMPLING] key on an TRITON Le in which the EXB-SMPL option (sold separately) has not been installed.

No space available on medium

Meaning: When you attempted to save a file or create a director, the media contained no free space.

Action: Either delete an existing file, or exchange the media with one that has sufficient free space.

Not enough memory

Meaning: When starting realtime recording in Sequencer mode, the minimum amount of free memory (such as memory for the BAR events up to the recording start location) could not be allocated.

Action: Delete other song data etc. to increase the amount of free memory.

Meaning: When executing "Save Exclusive" in Media mode, there was no remaining sequence memory. Alternatively, when executing "Load Exclusive," sufficient free sequence memory could not be allocated.

Action: Delete song data. (If necessary, save the data before deleting it.)

Not enough memory to load

Meaning: When you attempted to load a .SNG file in Media mode, there was insufficient free memory.

Action: Delete other song data etc. to increase the amount of free memory.

Not enough memory to open pattern

Meaning: There was insufficient sequencer memory to open the pattern, so editing is not possible.

Action: Either delete unwanted data such as a song, track, or pattern, or do not open the pattern.

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Not enough multisample memory

Meaning: There is insufficient multisample memory. (The number of multisamples would exceed the maximum of 1,000.)

Action: Delete multisamples to increase the amount of free memory.

Not enough relative parameter memory

Meaning: There is insufficient memory for relative parameters. (The number of samples in the multisamples would exceed the maximum of 4,000.)

Action: Delete multisamples or indices of multisamples to increase the amount of free memory.

Not enough sample memory

Meaning: There is insufficient sample memory (for sample parameters or sample waveform data).

Action: Delete samples to increase the amount of free memory.

Not enough sample/multisample locations available

Meaning: The data you attempted to load would exceed the maximum number of multisamples or samples.

Action: In Sampling mode, execute "Delete Multisample" or "Delete Sample" to free a sufficient number, and reload the data.

Not enough song memory

Meaning: When executing the Sampling mode function Time Slice "Save," the total data for all song has used up the entire sequence data memory, so saving is not possible.

Action: Delete other song data etc. to increase the free memory.

O

Oscillator Mode conflicts (check PROG P2.1)

Meaning: In Sampling mode when you executed "Conv. To Program" with Use Destination Program Parameters checked, the conversion destination program "Mode (Oscillator Mode)" setting did not match.

Action: In Program mode, set the "Mode (Oscillator Mode)" of the conversion destination program. If converting a monaural multisample, select Single. If converting a stereo multisample, select Double.

P

Pattern conflicts with events

Meaning: It was not possible to execute the Bounce operation because one of the tracks contained a pattern, and the same measure of the other track contained events or a pattern.

Action: Open the pattern.

Pattern exists across destination to-end-of-measure or source from-measure

Meaning: When moving a measure, the edit operation could not be executed because a pattern had been put in the destination end measure or the source start measure, and had not been opened.

Action: Open the pattern.

Pattern exists in destination or source track Open pattern ?

Meaning: A pattern has been placed in the track that you specified as a destination or source for editing. If you wish to open the pattern and execute (the events of the pattern will be copied), press the[F8] ("OK") key. If you wish to execute without opening the pattern, press the [F7] ("Cancel") key.

Pattern used in song Continue ?

Meaning: During editing, the specified pattern has been Put to a track or is used by RPPR. To continue the operation press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

R

Rear sample is empty

Meaning: When executing the Sampling mode function Sample Edit "Link," the sample specified as the rear sample was empty.

Action: Specify a rear sample that contains data, and execute the function once again.

Root directory is full

Meaning: You attempted to create a file or directory in the root directory of the media, but this would exceed the maximum number of root directory entries.

Action: Either delete an existing file or directory, or exchange media.

S

Sample data used in other sample(s) Continue ?

Meaning: Other sample(s) use the same sample data as the sample that you are editing. To continue editing, press the [F8] ("OK") key.

Sample L and R are identical

Meaning: The edit operation could not be executed because the destination (save location) L and R sample numbers are identical.

Action: Select different sample numbers for L and R of the destination (save location).

Sample length is shorter than minimum

Meaning: You attempted to execute an editing operation that would make the sample data shorter than 8 samples.

Action: Change the editing range so that the sample data will be longer than 8 samples.

Sample used in other multisample(s) Continue ?

Meaning: The sample you are editing is used by other multisamples. To continue editing, press the [F8] ("OK") key.

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Selected file / path is not correct

Meaning: When loading a KSF file that was split across multiple media, the order in which you attempted to load the files was incorrect.

Action: Load the KSF file in the correct order. To view the file number order in which the KSF files were saved, you can check the Utility "Translation." (The sample name and number of the first KSF file will be displayed.)

Slice point over limit — Can't divide

Meaning: The Sampling mode "Time Slice" function or the "Time Stretch" **Slice** function would divide the sample into more samples than the maximum (1000), so "Divide" cannot be executed.

Action: Use "Link" to connect any "Index" that does not need to be divided; then execute "Divide."

Source is empty

Meaning: No data exists in the pattern that you specified as the source.

Action: Specify a pattern that contains musical data.

Source sample is empty

Meaning: When executing Insert, Mix, or Paste, the source sample is empty.

Action: Execute the Copy operation before executing Insert, Mix, or Paste.

T

There is no readable data

Meaning: Either the file size is 0 or the file does not contain data that can be accessed by the load or open operation. Alternatively, the data is damaged etc., and cannot be loaded or accessed.

U

Unable to create directory

Meaning: You attempted to create a directory that would exceed the maximum pathname length (76 characters for the full pathname).

Unable to save file

Meaning: When executing the Media mode utility menu command "Copy," the copy destination path length exceeded 76 characters.

Meaning: When saving a file in Media mode, the save destination path exceeded 76 characters.

Y

You can't undo last operation — Are you sure ?

Meaning: Once you enter event editing (even if you leave event editing without actually editing an event), it will no longer be possible to execute a Compare of the previous edit. If you wish to enter event editing, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

You can't undo this operation — Are you sure ?

Meaning: When you exit recording or event editing in Sequencer mode, the memory area for Undo (Compare function) is not allocated. If you wish to keep the data that was just recorded or edited, press the [F8] ("OK") key. If you wish to return to the previous data (i.e., to delete the data that was just recorded or edited), press the [F7] ("Cancel") key.

Meaning: When editing in Sequencer mode, memory area for Undo (Compare function) cannot be allocated. If you wish to execute the edit, press the [F8] ("OK") key. (It will not be possible to return to the state before editing.) If you decide not to execute the edit, press the [F7] ("Cancel") key.

Action: In order to allocate memory area for Undo (Compare function), delete unneeded data such as songs, tracks, or patterns. We recommend that you save data to media before you execute the edit operation.

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Data compatibility

The TRITON Le can load (and automatically convert) .PCG / .SNG files from TRITON keyboard models (TRITON / TRITON-pro / TRITON-proX) or the TRITON-Rack. However, please be aware of the following limitations and cautions.

The category of the programs or combinations may be inappropriate in some cases.

note The .KSC, .KMP, .KSF, .MID, .EXL, .AIF, and .WAV files of a TRITON keyboard model or TRITON-Rack are completely compatible. These files can be loaded / saved via external media.

Conversion loading of .PCG / .SNG files from a KARMA Music Workstation is not supported. However, .MID and .EXL files are completely compatible, in the same way as for TRITON keyboard models and the TRITON-Rack.

Parameters that are valid for TRITON keyboard models and the TRITON-Rack, but invalid for the TRITON Le

1. Insert effect (IFX)

The TRITON Le provides one insert effect. If a .PCG / .SNG file is loaded from a TRITON keyboard model or the TRITON-Rack (which provide five insert effects), data for IFX2, 3, 4, and 5 parameters will not be loaded. IFX1 parameter data will be loaded as IFX parameter data.

2. "BUS Select" parameter

The TRITON Le provides four audio outputs: (MAIN) L / MONO, R, and (INDIVIDUAL) 1 and 2. If a .PCG / .SNG file is loaded from a TRITON keyboard model or the TRITON-Rack (which provide in addition (INDIVIDUAL) 3 and 4 audio outputs), the "BUS Select" parameters of the data will be converted as follows when loaded.

IFX1 → IFX	3 → 1
IFX2 → L / R	4 → 2
IFX3 → L / R	3 / 4 → 1 / 2
IFX4 → L / R	
IFX5 → L / R	

*: Program, combination, drum kit, global settings, song (TRITON keyboard models), and multi (TRITON-Rack) data within a .PCG or .SNG file.

3. Program, combination, drum kit, and arpeggio pattern bank / number structure

The following tables show the bank / number structure for the programs, combinations, drum kits, and arpeggio patterns of the TRITON keyboard models and TRITON-Rack, relative to those of the TRITON Le.

If a .PCG / .SNG file is loaded from a TRITON keyboard model or TRITON-Rack containing a bank / number that does not exist on the TRITON Le, the bank / number settings for each type of data will be converted into the bank / number shown in the table. Please use caution when loading files from a TRITON keyboard model or the TRITON-Rack.

Combinations

TRITON keyboard model	TRITON-RACK	TRITON Le
A	INT-A	A
B	INT-B	B
C	INT-C	C
D*	INT-D*	-
-	INT-E*	-
-	EXB-A*	-
-	EXB-B*	-
-	EXB-C*	-
-	EXB-D*	-
-	EXB-E*	-
-	EXB-F*	-
-	EXB-G*	-
-	EXB-H*	-

*: Banks for which the TRITON Le has no corresponding bank

Programs

TRITON keyboard model	TRITON-RACK	TRITON Le
A	INT-A	A
B	INT-B	B
C	INT-C	C
D	INT-D	D
E*	INT-E*	A#
F*	INT-F*	A#
G	G	G
g(1)-g(9)*	g(1)-g(9)*	G#
g(d)	g(d)	g(d)
-	EXB-A*	A#
-	EXB-B*	B#
-	EXB-C*	C#
-	EXB-D*	D#
-	EXB-E*	A#
-	EXB-F*	B#
-	EXB-G*	C#
-	EXB-H*	D#

*: Banks / numbers of a TRITON keyboard model or TRITON-Rack whose data is being convert-loaded, for which the TRITON Le has no corresponding bank / number

#: TRITON Le bank / number into which the * bank / number will be converted when loading.

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Drum Kits

TRITON keyboard model	TRITON-RACK	TRITON Le
00-15(A/B)	00-15(I-A/B)	00-15(INT)
16-23(C)	16-23(E-A)	16-23(User)
24-31(C)*	25-31(E-A)*	16-23(User)#
32-39(D)*	32-39(E-B)*	16-23(User)#
40-47(D)*	40-47(E-B)*	16-23(User)#
48-55(User)*	48-55(E-C)*	16-23(User)#
56-63(User)*	56-63(E-C)*	6-23(User)#
-	64-79(E-E)*	All 32(GM)#
-	80-95(E-D)*	All 32(GM)#
-	96-111(E-F)*	All 32(GM)#
-	112-127(E-G)*	All 32(GM)#
-	128-143(E-H)*	All 32(GM)#
64-72(GM)	144-152(GM)	24-32(GM)

*: Banks / numbers of a TRITON keyboard model or TRITON-Rack whose data is being convert-loaded, for which the TRITON Le has no corresponding bank / number

#: TRITON Le bank / number into which the * bank / number will be converted when loading.

Arpeggio Patterns

TRITON keyboard model	TRITON-RACK	TRITON Le
P0-4	P0-4	P0-4
U000-199(A/B)	U00-199(I-A/B)	U000-199(INT)
U200-215(C)	U200-215(E-A)	U200-215(User)
U216-231(D)*	U216-231(E-B)*	U200-215(User)#
-	U232-247(E-C)*	U200-215(User)#
-	U248-263(E-D)*	U200-215(User)#
-	U264-279(E-E)*	U200-215(User)#
-	U280-295(E-F)*	U200-215(User)#
-	U296-311(E-G)*	U200-215(User)#
-	U312-327(E-H)*	U200-215(User)#

*: Banks / numbers of a TRITON keyboard model or TRITON-Rack whose data is being convert-loaded, for which the TRITON Le has no corresponding bank / number

#: TRITON Le bank / number into which the * bank / number will be converted when loading.

Parameters that are valid on TRITON keyboard models, but invalid on the TRITON Le

1. Global mode parameters of a TRITON keyboard model

- "PC I/F Baud Rate" and "Beep" will be saved as internal data, but the data will be ignored.
- If "MIDI Clock" is set to External PCI/F, it will function as External.

Parameters that are valid on the TRITON-Rack, but invalid on the TRITON Le

1. Global mode parameters of the TRITON-Rack

- "System Clock" will be saved as internal data, but the data will be ignored.

Parameters that are invalid on the TRITON-Rack, but valid on the TRITON Le

1. Combination, Multi, and Global mode parameters of the TRITON-Rack

The following parameters are invalid on the TRITON-Rack, but are saved as internal data, and the loaded values or the default values will be output when saved. This means that if a TRITON-Rack .PCG file is loaded, these settings may be changed.

Combination and Multi modes:

MIDI Filter "Enable Foot Pedal / Switch"

Global mode:

"Convert Position"
"Foot Switch Assign"
"Foot Pedal Assign"
"Damper Polarity"
"Foot Switch Polarity"

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Media mode information

Chunks that are supported

When loading

AIFF files

When data is loaded into the TRITON Le, the following four chunks are referenced: Common chunk, Sound Data chunk, Marker chunk, and Instrument chunk. Other chunks are ignored.
Restrictions on the parameters in each chunk are described below.

Common chunk
Only one (mono) or two (stereo) channels are supported.
Sample sizes of 1–16 bits are supported. If the sample data is 8 bits or less, it will be loaded as 16 bit data with the lower 8 bits always at 0.

Sound Data chunk
Offset and block size are ignored. (Block-Aligning Sound Data is not supported.)

Marker chunk
Up to eight markers are supported. The ninth and subsequent markers will be ignored.

Instrument chunk
If the loop play mode is ForwardBackwardLooping, this will be handled as ForwardLooping.
baseNote, detune, lowNote, highNote, lowVelocity, highVelocity, gain, and releaseLoop will be ignored.

WAVE files

When loading, the TRITON Le references the Format Chunk, Sample Chunk, and Wave Data. Limitations are discussed below.

Format chunk
Standard PCM format is the only format category that is supported.
Only one (mono) or two (stereo) channels are supported.
Sample sizes of 1–16 bits are supported. If the sample data is 8 bits or less, it will be loaded as 16 bit data with the lower 8 bits always at 0.

Sample Chunk
Only the loop data is referenced. If there is multiple loop data, the loop with the greatest number of loop playback times (Play Count) will be used. Even if the Type is Alternating or Backward, it will be handled as Forward Loop.

Wave data
The Wave List chunk is not supported.

When exporting

AIFF files

When exporting, the TRITON Le will use the Common Chunk, Sound Data Chunk, Marker Chunk, and Instrument Chunk.
Limitations on the parameters within each chunk are discussed below.

Common Chunk
The number of channels is fixed at 1 (mono).
The sample size is fixed at 16 bits.

Marker Chunk
Two markers are used as Loop Start Address and End Address respectively.

Instrument Chunk
The loop play mode is fixed at Forward Looping.
Zone data of the multisamples will not be exported.

WAVE files

When exporting, the TRITON Le will use the Format Chunk, Sample Chunk, and Wave Data. Restrictions are given below.

Format Chunk
The format category is fixed at standard PCM format.
The number of channels is fixed at 1 (mono).
The sample size is fixed at 16 bits.

Sample Chunk
The Type is fixed at Forward Loop.
Zone data of the multisamples will not be exported.

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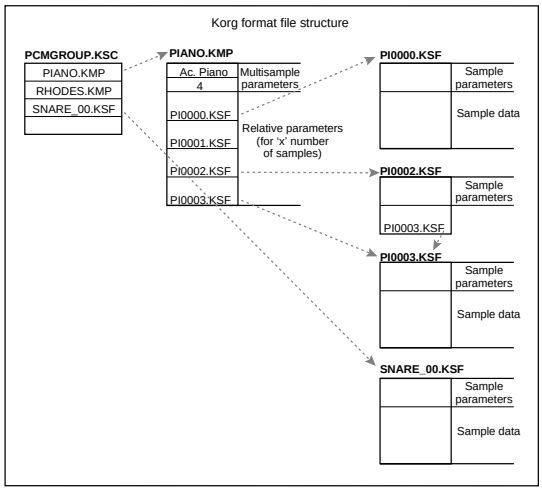
About KORG format files

KORG format file structure

There are three types of files: .KMP files for multisamples, .KSF files for samples, and .KSC files which handle the first two as a collection. Similar to the AIFF format, .KMP / .KSF files consist of chunks.



Unless stated otherwise, all data is Big Endian.

● **When a Korg format file saved on the TRITON Le is loaded by the TRINITY,**

- Of the parameters for each song, the following parameters are ignored (the chunk that includes the parameter is given in parentheses)

Filter cutoff	(RLP1 chunk)
Transpose	(RLP2 chunk)
Resonance	(RLP2 chunk)
Attack	(RLP2 chunk)
Decay	(RLP2 chunk)

- Of the parameters for each sample, reverse playback and loop off settings (included in the attribute parameters of the SMD1 chunk) will be ignored, and will be handled respectively as forward playback and loop on. Only the twelve types of sampling frequency supported by the Trinity will be loaded correctly, and if the frequency is unsupported, the next lowest frequency will be selected.
- Split sample files cannot be loaded.

● **When a Korg format file saved on the TRINITY is loaded into the TRITON Le,**

- Compressed sample files cannot be loaded.
- Multisamples that use internal samples of the Trinity will be assigned identically-numbered RAM samples.

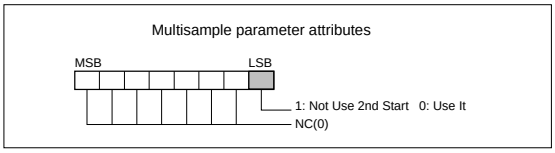
KMP (KORG Multisample Parameter) files

These consist of the following chunks.

● **Multisample parameter chunk**

Chunk ID ('MSP1')	[4 bytes]
Chunk size (fixed at 18)	[4 bytes]
Multisample name	[16 bytes]
Number of samples in the multisample	[1 byte]
Attributes	[1 byte]

- Attributes



● **Relative parameter chunk 1**

Chunk ID ('RLP1')	[4 bytes]
Chunk size (18 × number of samples in the multisample)	[4 bytes]
Original key	[1 byte]
MSB 1: Non Transpose 0: Transpose bits 6–0 original key	
Top key (0–127)	[1 byte]
Tune (–99…+99 cents)	[1 byte]
Level (–99…+99 cents)	[1 byte]
Pan (0–127 currently unused)	[1 byte]
Filter cutoff (–99…+99 currently unused)	[1 byte]
KSF filename (including period and extension)	
[12 bytes] × number of samples in the multisample	

If the .KSF filename is "SKIPPEDSAMPL", it will be treated as a sample skipped during loading.
If the .KSF filename is "INTERNALnnnn", internal samples will be used.

● **Relative parameter chunk 2**

Chunk ID ('RLP2')	[4 bytes]
Chunk size (4)	[4 bytes]
Transposing (–64…+63)	[1 byte]
Resonance (–99…+99)	[1 byte]
Attack (–99…+99)	[1 byte]
Decay (–99…+99)	[1 byte]

● **Multisample number chunk**

Chunk ID('MNO1')	[4 bytes]
Chunk size (4)	[4 bytes]
Multisample number (0–)	[4 bytes]

KSF (KORG Sample File) files

There are four types of structure for these files. One consists of a Sample Parameter chunk, Sample Data chunk, and Sample Number chunk (SMP1 + SMD1 + SNO1). Another consists of a Sample Parameter chunk, Sample Data chunk, Sample Filename chunk, and Sample Number chunk (SMP1 + SMD1 + SMF1 + SNO1). The latter structure is in the case where the sample data of the Sample chunk is empty, and uses the sample data of the .KSF file specified by the Sample Filename chunk (shared sample data).
When saving to a SmartMedia and a single media cannot accommodate all of the data, it is possible to automatically divide the file and continue the save operation.
When a .KSF file is created in this way, the first file will consist of the Sample Parameter chunk, Sample Number chunk, a divided Sample Parameter chunk, and a divided Sample Data chunk (SMP1 + SNO1 + SPD1 + SDD1), and the second and subsequent files will consist of a divided Sample Data chunk (SDD1).

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● **Sample parameter chunk**

Chunk ID (‘SMP1’)	[4 bytes]
Chunk size (32)	[4 bytes]
Sample name	[16 bytes]
Default bank (0–3)	[1 bytes]
Start address	[3 bytes]
2nd start address	[4 bytes]
Loop start address	[4 bytes]
Loop end address	[4 bytes]

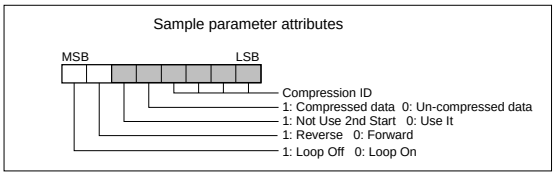
● **Sample data chunk**

Chunk ID (‘SMD1’)	[4 bytes]
Chunk size (12 + number of sample databytes)	[4 bytes]
Sampling frequency	[4 bytes]

The sampling frequencies supported by the TRITON Le is 48000 / 47619 / 44100 / 32000 / 31746 / 31250 / 29400 / 24000 / 23810 / 22254 / 22050 / 21333 / 21164 / 20833 / 19600 / 16000 / 15873 / 15625 / 14836 / 14700 / 14222 / 14109 / 13889 / 13067 / 12000 / 11905 / 11127 / 11025 / 10667 / 10582 / 10417 / 9891 / 9800 / 9481 / 9406 / 9259 / 8711 / 8000 / 7937 / 7813 / 7418 / 7350 / 7111 / 7055 / 6945 / 6534 / 6000 / 5953 / 5564 / 5513 / 5333 / 5291 / 5208 / 4945 / 4900 / 4741 / 4703 / 4630 / 4356 / 4000 / 3968 / 3906 / 3709 / 3675 / 3556 / 3527 / 3472 / 3267 / 3000 / 2976 / 2782 / 2756 / 2667 / 2646 / 2604 / 2473 / 2450 / 2370 / 2352 / 2315 / 2178 / 2000 / 1984 / 1855 / 1838(Hz).

Attributes	[1 byte]
Loop tune (–99...+99 cents)	[1 byte]
Number of channels (1)	[1 byte]
Sample size (8 / 16)	[1 byte]
Number of samples	[4 bytes]
Sample data	variable length

• Attributes



● **Sample number chunk**

Chunk ID (‘SNO1’)	[4 bytes]
Chunk size (4)	[4 bytes]
Sample number (0–)	[4 bytes]

● **Sample filename chunk**

Chunk ID (‘SMF1’)	[4 bytes]
Chunk size (12)	[4 bytes]
KSF filename	[12 bytes]

If the .KSF filename is “SKIPPEDSAMPL”, it will be treated as a sample skipped during loading.

If the .KSF filename is “INTERNALnnnn”, internal samples will be used.

● **Divided sample parameter chunk**

Chunk ID (‘SPD1’)	[4 bytes]
Chunk size (12)	[4 bytes]

The following up to the sample size is the same as in the SMD1 chunk

Sampling frequency	[4 bytes]
Attributes	[1 byte]
Loop tune	[1 byte]
Number of channels	[1 byte]
Sample size	[1 byte]
Number of samples	[4 bytes]

Total number of samples in all divided files

● **Divided sample data chunk**

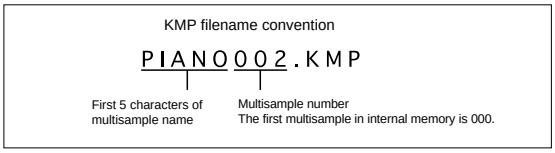
Chunk ID (‘SDD1’)	[4 bytes]

KSC(Korg SCript) file

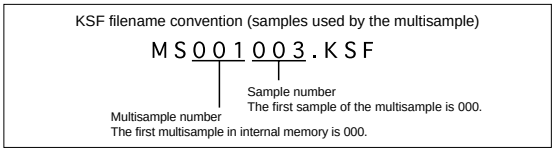
These files are text files which contain a list of filenames for .KMP / .KSF files which are to be handled together.
Lines beginning with # are ignored as comment lines.
The first line of the file must begin with “#KORG Script Version 1.0” and subsequent lines (except for comment lines) consist only of filename. Only files with an extension of KMP / KSF are processed.

Filename conventions

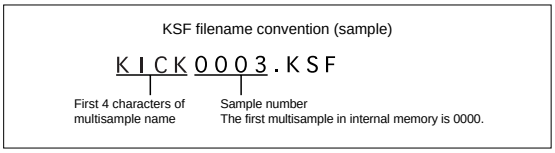
.KMP filename for “Save All” or “Save All Multisamples”



When data is saved using “Save All,” “Save All Multisample” or “Save One Multisample,” the individual .KSF files used by the Multisample (the .KMP file) are automatically given filenames according to the following convention.



Likewise, when data is saved using “Save All” or “Save All Samples,” the individual .KSF files are automatically given filenames according to the following convention.



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Option EXB-SMPL

Please read this before you begin installation

Safety precautions

Warnings

- When installing, repairing, or replacing the parts of this product, you must perform only those actions that the owner's manual directs, and no other.
- Do not apply excessive force to the electronic components or connectors of the circuit board(s), or attempt to disassemble them. This could cause electric shock, fire, or malfunction.
- Before installing this product, be sure to disconnect the power supply cable, and the connecting cables to any peripheral devices. Failure to do so could cause electrical shock or may damage this device.

Cautions

- Do not allow this product to become wet, and do not allow objects to be placed on top of it. Doing so could cause malfunction.
- Before touching this product, touch a metal component of the device into which it will be installed, to discharge any static electricity that may be present in your body. Static electricity may damage the electronic components.
- When handing this product, be careful not to touch the leads on the back side of the circuit board (the side opposite that on which the components are mounted). The sharp points may cause injury.
- When installing this product, never touch components or circuit boards that are not related to the connections you are required to make. Doing so may cause electrocution or malfunctions.
- When installing this product, be careful not to cut your hands on the sharp edges of the metal brackets etc. of this product or of the device into which it is being installed.
- When installing this product, be careful that screws or other parts do not fall into the device into which it is being installed.

Korg Inc. takes no responsibility for any malfunctions or damage that may occur from improper use or modification of this product. Nor will Korg Inc. be responsible for any damages resulting from the loss or destruction of data.

Memory that can be used with the option board

■ EXB-SMPL sampling upgrade

The functionality of the TRITON Le can be expanded in the following ways by installing the EXB-SMPL sampling upgrade.

The upgrade adds audio inputs (AUDIO INPUT), Sampling mode (sampling functionality), and a SCSI connector for external SCSI devices.

In Sampling mode you can record 48 kHz 16 bit mono / stereo samples from an analog audio source connected to the AUDIO INPUT 1 and 2 jacks, such as a mic or audio device. When the included 16 Mbyte DRAM SIMM module is installed in the TRITON Le's SIMM slot, you will be able to sample for approximately 2 minutes 54 seconds in monaural, or approximately 1 minute 27 seconds in stereo.

In modes other than Sampling mode, the analog audio signal from a mic or instrument connected to the AUDIO INPUT jacks can be processed by the insert effect, master effects, and master EQ, allowing the TRITON Le to function as a 2-in 4-out effects processor.

You will also be able to connect external SCSI devices such as hard disk or removable media drives. In the same way as when using Smart Media, the TRITON Le's programs, combinations, song data, and sample data can be saved / loaded on high-capacity storage media (e.g., hard disks, MO disks, Zip disks, Jaz disks, ORB disks). Akai (S1000 / 3000), Korg, AIFF, or WAVE format sample files can also be loaded from a CD-ROM drive.

The TRITON Le cannot format media with a format of other than 512 bytes / block (such as 640 MB, 1.3 GB MO disks etc.).

CD-ROM formats that can be loaded

- AKAI (S1000 / S3000) format
- ISO9660 Level 1 format (multisession data can be loaded only if the first session is in ISO9660 format)
- TRINITY format (only .KSC / .KMP / .KSF files can be loaded)

■ Memory that can be used

DRAM SIMM memory is used as sample data RAM.

Caution when purchasing DRAM SIMM modules

Some commercially available DRAM SIMM modules cannot be used on the TRITON Le. Before you purchase memory modules, please check the following points.

Types of DRAM SIMM modules that can be used on the TRITON Le

- 72-pin 16 Mbyte or 32 Mbyte
- Access time of 60 ns or less
- Address input 11 bit (A0–A10)
- Power supply voltage 5 V

DRAM SIMM modules that meet the above requirements can be used.

If you have any questions regarding the type of DRAM SIMM modules that can be used, please contact your local Korg distributor.

On the TRITON Le, a total of two DRAM SIMM modules can be installed, for a maximum total of 64 Mbytes (32 Mbytes x 2 modules). (☞"3–3. Installing additional DRAM SIMM's")

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If you install only DRAM SIMM modules (without installing the EXB-SMPL), you will be able to load multisample and sample data in Media mode.

note DRAM SIMM boards are not a manufacturer option. Please purchase commercially-available boards that are sold for use in computers.

note In order to use the maximum of 64 Mbytes, you will need to remove the 16 Mbyte DRAM SIMM that was installed when installing the EXB-SMPL, and use two 32 Mbyte DRAM SIMM modules.

note The memory banks and sampling time will depend on the capacity of the DRAM SIMM boards you install, and on the slot locations. (☞p.90)

Please note when installing an option board

- So that static electricity in your body does not damage the electronic components, touch the ground wire of a grounded device or an unpainted metallic component to discharge any static electricity in your body before installing an option board. Internal components of this instrument and of the option boards may be damaged by static electricity.
- Follow the installation procedure, and be sure that each part is installed correctly and in the correct orientation.
- Please use care in handling option boards. Dropping them or applying pressure to them may damage the components.
- Avoid touching exposed metal edges of the circuit board, or portions that need not be handled during installation.
- All screws (and washers) that are removed will be used, so be careful not to misplace them.
- Do not use screws other than those that are installed in the option board and this instrument. Using screws of a different shape or length may damage the unit or cause it to malfunction.
- Be sure to firmly tighten the screws used for attachment.
- Be sure that the option board is inserted correctly into the connector or slot. After installation, be sure to check that the board is installed correctly. If the board is not inserted all the way, faulty contact or power supply shorts can occur, making the unit malfunction.
- Be careful not to drop parts or the option board into the inside of the instrument.

  If you are unable to retrieve a screw or part that was dropped inside the instrument, please contact your local Korg distributor.

Option board / memory installation procedure

Before you perform the installation, be sure to read the foregoing section “Please note when installing an option board / memory.”

1. Preparations for installation

During the installation, be careful not to cut your hand on any sharp edges of the TRITON Le or of the option board / memory.

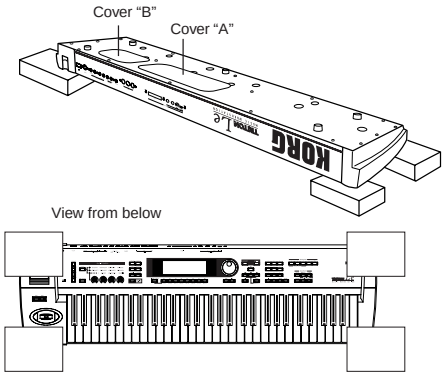
① The EXB-SMPL sampling upgrade contains the following items. Make sure that no items are missing.

- EXB-SMPL (board) : 1 board
- 16 Mbyte DRAM SIMM : 1 module
- Screws, 3 mm × 8 mm : 3 screws

② You will need a “+” (plus) screwdriver, and some magazines or other material (to prevent damage to the joystick and knobs etc.: see diagram below)

③ Turn off the TRITON Le, and disconnect the AC / AC power supply cable and any other cables by which other devices are connected.

④ As shown in the following diagram, place four magazines etc. at the four corners of the instrument to prevent damage to the joystick and knobs, and place the TRITON Le upside down on top of them.



Place in each of the four corners so that joystick and knobs are not contacted

When turning the TRITON Le upside down, be careful not to loose your balance and drop the instrument.

⑤ Detach the appropriate cover for the option board / memory you wish to install.

When installing the EXB-SMPL, detach cover “A.” When installing the DRAM SIMM, detach cover “B.”

(☞Detaching the cover is described in the following sections “2–1” or “2–2.”)

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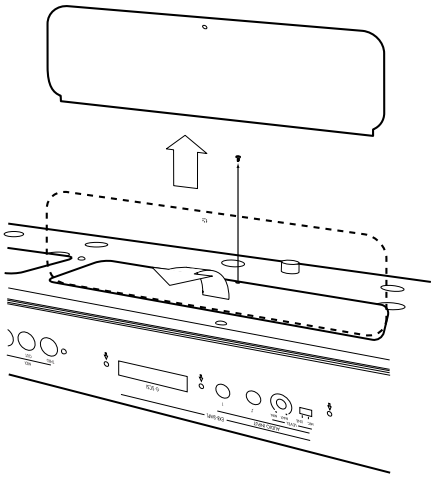
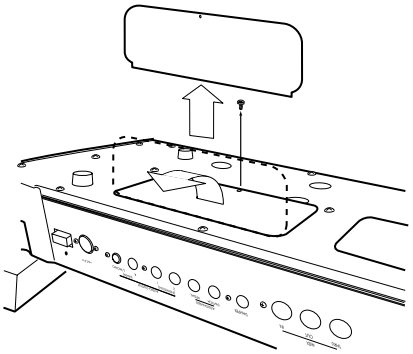
2–1. Detaching cover “A” for the EXB-SMPL

① Use a screwdriver to remove one screw from cover “A.” When the TRITON Le is upturned and the rear panel is toward you, cover “A” is the large one at the right.

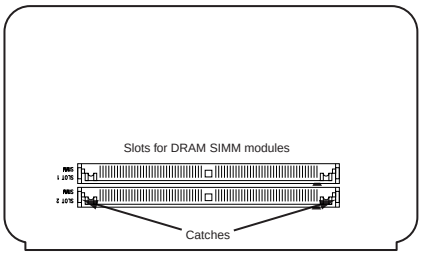


2–2. Detaching cover “B” for DRAM SIMM

① Use a screwdriver to remove one screw from cover “B.” When the TRITON Le is upturned and the rear panel is toward you, cover “B” is the small one at the left.



When cover “B” is removed



3–1. Installing the EXB-SMPL

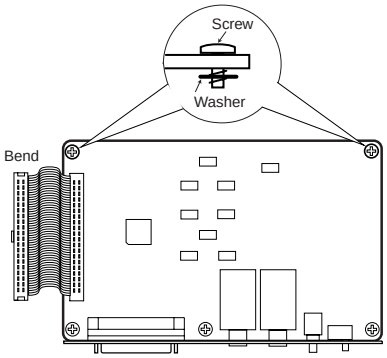
You must leave the AC / AC power supply disconnected until you finish the entire process of removing the cover, installing the option board or memory, and reattaching the cover.

① Make sure that **cover “A”** has been removed. (☞“1. Preparations for installation,” “2–1. Detaching cover “A” for the EXB-SMPL”)

② Remove the EXB-SMPL from its packing pouch.

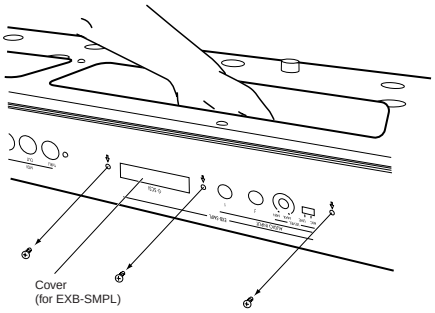
③ Note that screws and washers are attached to two corners of the board.

④ Lightly bend the flat cable as shown in the diagram below.

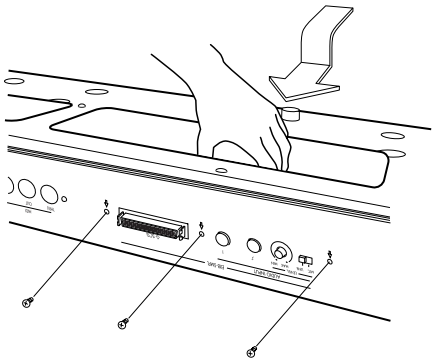


⑤ From the rear panel of the TRITON Le, remove the three screws from the cover of the EXB-SMPL installation opening, and remove the EXB-SMPL cover.

The cover (EXB-SMPL) and the three screws you removed will not be used. Do not leave them inside the TRITON Le.



⑥ Place the EXB-SMPL so that its jacks, switch, knob, and SCSI connector extend from the rear of the TRITON Le, and while using one hand to support the EXB-SMPL in position, tighten the included three screws from the rear panel.



⑦ Use the two screws to attach the EXB-SMPL to the corresponding brackets inside the TRITON Le.

Before the screws are tightened, the EXB-SMPL will float slightly above the brackets. If at this time you apply excessive force to the EXB-SMPL, the screws or washers may come out.

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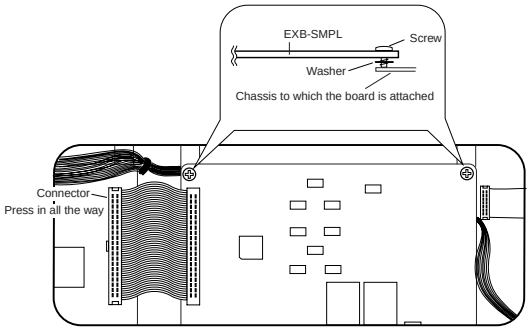
⑧ Attach the flat cable as shown in the diagram. Plug the cable all the way into the connector.

When connecting the flat cable, be careful not to touch any part other than the connector on the circuit board.



⑨ Reversing the procedure by which you removed **cover "A,"** re-attach the cover.

3–2. Installing DRAM SIMM (sample data RAM) modules

Install the 16 Mbyte DRAM SIMM (sample data RAM) included with the EXB-SMPL into the slot.
The memory module will work correctly in either slot. For ease of installation, we suggest that you use SIMM slot 2 first.

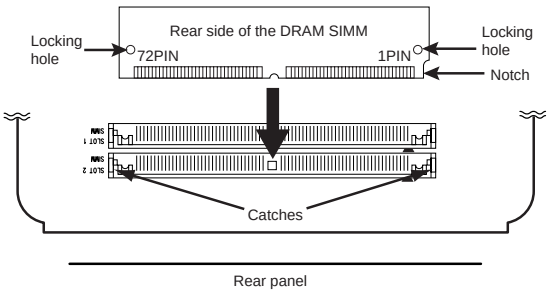
You must leave the AC / AC power supply disconnected until you finish the entire process of removing the cover, installing the option board or memory, and reattaching the cover.

① Make sure that **cover "B"** has been removed. (☞"1. Preparations for installation," "2–2. Detaching cover "B" for DRAM SIMM")

② Remove the DRAM SIMM from its packing pouch.

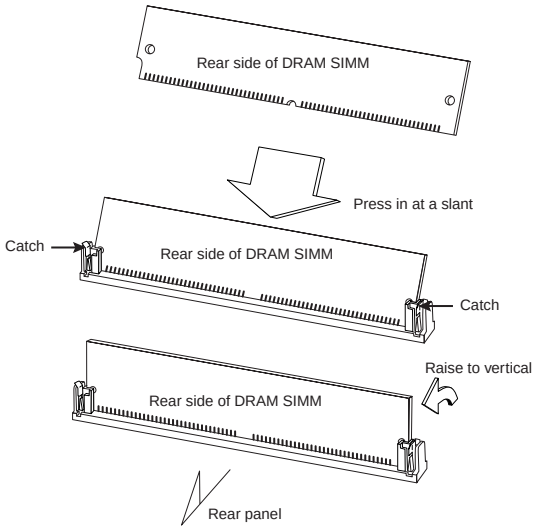
③ Verify the location of the slot into which you wish to install the DRAM SIMM.

Looking from the rear of the TRITON Le, the nearer slot is SIMM slot 2.



④ The notched side of the DRAM SIMM is PIN 1. Install the DRAM SIMM with its PIN 1 side aligned with the PIN 1 mark (▬) of the slot.

⑤ At a slant, press the DRAM SIMM firmly all the way into the slot, and raise it to the vertical position until the catches of the slot click into the locking holes of the DRAM SIMM. When doing so, pressing the catches of the slot apart to the left and right will help the board go in smoothly.



⑥ Reversing the procedure by which you removed **cover "B,"** re-attach the cover.

⑦ When all steps have been completed, turn on the power and make sure that the DRAM SIMM has been installed correctly. (☞"4. Checking after installation")

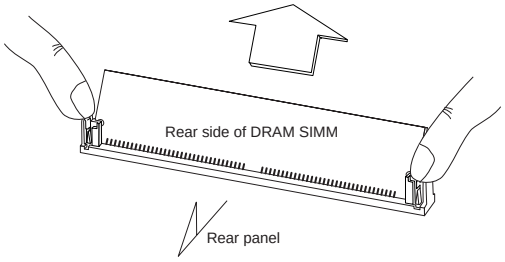
3–3. Installing additional DRAM SIMM's

A maximum of two memory modules can be installed. If you want to use two 32 Mbyte DRAM SIMM modules, the 16 Mbyte DRAM SIMM that you installed when installing the EXB-SMPL must be removed as described in step ③ below.

① Make sure that cover "B" has been removed. (☞"1. Preparations for installation," "2–2. Detaching cover "B" for DRAM SIMM")

② A 16 Mbyte DRAM SIMM is installed in the nearer slot. If you want to add only one more memory module, install it in the remaining slot. (☞"3–2. Installing DRAM SIMM (sample data RAM) modules," steps ④ and ⑤.)

③ If you will be installing two DRAM SIMM modules, remove the currently-installed memory. Spread the tabs of the DRAM SIMM slot apart to left and right (after releasing the catches), tilt the DRAM SIMM over at an angle, and pull it out.



When you spread the catches of the slot apart, the DRAM SIMM may pop out vigorously and fall into an opening (inside the instrument). Please be careful

④ Install DRAM SIMM modules in the two slots as described in steps ④ and ⑤ of "3–2. Installing DRAM SIMM (sample data RAM) modules."

⑤ Reversing the procedure by which you removed cover "B," re-attach the cover.

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⑥ When all steps have been completed, turn on the power and make sure that the DRAM SIMM has been installed correctly. (☞“4. Checking after installation”)

4. Checking after installation

When the power is turned on, the LCD screen will show the capacity of the currently-installed memory, and will indicate “EXB-SMPL.”
After installing an option board / memory, be sure to turn on the power and make sure that the option board / memory that you installed is displayed in the LCD screen.
If it is not displayed, the installation may not have been performed correctly. Check once again that the board is installed correctly.
If you have any questions regarding installation, please contact your local Korg distributor.

- EXB-SMPL: EXB-SMPL is installed
- SIMM Slot1: If a SIMM is installed in SIMM slot 1, the capacity of the SIMM “**(**MB)**” will be displayed.
  If no SIMM is installed, the display will indicate “----”.
- SIMM Slot2: If a SIMM is installed in SIMM slot 2, the capacity of the SIMM “**(**MB)**” will be displayed.
  If no SIMM is installed, the display will indicate “----”.

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